

Purchasing Week

McGraw-Hill's National Newspaper of Purchasing

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New York, N. Y., September 12, 1960

\$6 A YEAR U.S. AND CANADA \$25 A YEAR FOREIGN

Detroit Sparks Big Romance With Fleet Buyers

This Week's

Purchasing Perspective

SEPT. 12-18

NEW LOOK—The world's largest clearinghouse for exchange of management information is taking a fresh look at its slant on purchasing. The American Management Association has asked 15 of the country's leading purchasing executives to meet in New York Sept. 29 to discuss and appraise the AMA's purchasing management program.

In assembling its blue-ribbon "task force" the association hopes to gain a new perspective of the industrial procurement function. For one thing it wants to know whether its present scheduling of purchasing and materials management courses, workshops, and seminars—which already comprise some 15% of the AMA Manufacturing Division activities—are meeting the professional educational needs of purchasing executives. Another point is whether the AMA should set up purchasing as a separate division within the AMA organization, a move that

(Turn to page 51, column 4)

Steel/Center Cost Cutting Won't Reduce Services

Chicago—Steel warehouse officials say their prices have hit rock bottom and can't go any lower "if we're to stay in business."

A PURCHASING WEEK check of major steel service centers across the nation found most of them switching their attention to cost-cutting in an effort to recoup lost profits.

Will this affect buyer services? The service centers say it will

(Turn to page 4, column 2)

Heave-Ho

Rome—P.A.'s don't often win popularity contests for throwing their weight around, but Al Oerter, who buys hydraulic equipment for Grumman Aircraft, Bethpage, N. Y., became an Olympic hero last week as he led a clean sweep by U.S. athletes in the discus throw. In copping the gold medal, Oerter erased his own 4-year-old Olympic record by more than 10 ft. with a heave of 194 ft. 2 in.

Pennsy Strike Delays Deliveries; Jams Other Transportation Routes

Philadelphia — Industrial plants along the sprawling Pennsylvania Railroad system turned to "anything on wheels" last week to keep traffic moving over, under, and around 10,000-miles of strike-idled track.

Truck and air freight excess capacity was filled to overflowing as alternate rail lines oiled up surplus equipment, hitched on extra freight cars and speeded up schedules to fill the huge transportation gap left by the Pennsy walkout on Sept. 1.

Despite this all-out effort, delivery delays were frequent in the 13-state area served by the nation's largest rail carrier. Plant shutdowns and production curtailments were also reported.

But the biggest problem proved to be getting shipments from plants to rail lines by truck—and it became immediately evident to all that higher transport costs would result. And it was the customer—not the supplier—paying

(Turn to page 51, column 1)

FLEET BUYER'S GUIDE

Automakers' 1961 models will stress:

• **Variety:** 16 low-price category candidates for fleet use, including 12 "compact" models.

• **Economy:** New designs geared to keep costs low.

What This Means To You:

• **Steady Prices:** Competition in 1961 models will hold tags even — or only slightly above 1960.

• **Bigger Choice:** Four new compacts and economy lines of higher priced name plates have expanded list of fleet candidates. Middle line models of Ford, Chevrolet, and Plymouth also face new price competition from "king-size" compacts.

• **Lower Upkeep:** Both power plant and styling changes are aimed at reduced operational costs through increased mileage, cheaper repairs, less depreciation loss.

Makers Pitch Drive On Compactness, Economy With Touch of Glamor

Detroit—Automakers began taking the wraps off their 1961 models this week. The unveilings—to continue into early October—will reveal a series of new products designed and priced with the fleet owner in mind.

The emphasis on compacts and low-priced lines of the traditionally larger and more expensive makes and models clearly has set up the industrial buyer as one of the more important targets of all the car makers (see box left).

Competition in the low-price field—the big market for fleet sales—is now up to 16 makes, with a total of 12 compacts also poised to challenge the traditional big volume cars for market supremacy. Here's what's at stake:

• **The Big Volume Three**—Chevrolet, Ford, and Plymouth—stand to lose their monopoly of the low-priced field. Mercury, Pontiac, and Dodge will be pitching for a share of the low-priced market, competing directly with the Big Three nameplates and thus the compact market as well.

• **American Motors**, with a completely restyled Rambler American, again will be battling all the Big Three compacts for market leadership in the small car field.

• **In the battle between compacts vs compacts and compacts vs the traditional big-volume three**, the few remaining upper medium price cars, which together with the three luxury models captured only one-fourth of the 1960 model year sales, may be pushed right off the map.

In the resulting donneybrook, the fleet car buyer stands to reap the biggest benefits of all. Never

(Turn to page 52, column 1)

Machine Tool Builders Look For 5-10% Boost in Tags by October

Chicago—Tool builders looked optimistically for a rash of new orders as thousands of metal working executives began flocking here last Monday to take in the big machine tool shows.

But many tempered their hopes with worry over general business conditions. Said one exhibitor: "No amount of interest will result in orders if business activity doesn't generate new demands for capital equipment."

• Although the spotlight on all three shows—Machine Tool Exposition-1960, Production Engineering Show, and Coliseum Machinery show—was on automatically-controlled tooling, much comment centered around the subject of pricing.

• Most tool makers who didn't go along with the price increases in the past few months gave notice that boosts are in the works—before the end of October in most cases. When all increases are in, average tags should be up about 5% to 10% over last year, according to industry observers.

While the tool makers were quick to admit that numerical

control "isn't the answer for every metalworking shop," they were 100% unanimous in their view that every company will have to change its buying habits to remain competitive. Here's how one builder put it:

"Large scale automation as the auto companies practice it will probably never find its way into the average shop. But every company will have to automate to some degree or it will be out of

(Turn to page 52, column 4)

Next Week: Fleet Car Review



Detroit—The busy man pictured above is Don MacDonald, McGraw-Hill's automotive expert who works full time reporting facts, figures, and new developments in the auto industry.

Starting in the Sept. 19 issue of PURCHASING WEEK MacDonald will write a weekly report on the bevy of 1961 model cars as they are put on display in dealer show-

rooms. Appearing under the title "Automotive Perspective," MacDonald's timely comments will be angled specifically to the purchasing agent as a fleet buyer.

This new PW feature, to appear during the next four weeks, will assess the new cars specifically for their fleet advantages and characteristics. In all cases MacDonald will have inspected each car; in most cases he will have driven them.

A graduate aeronautical engineer, knowledgeable in fuels and engines generally, MacDonald has been covering the automotive industry since 1953. Look for his authoritative comments on the new fleet cars in "Automotive Perspective," starting next week in PW's New Products section.

P/W PANORAMA

• **Machine Tool Buyers** can't help but have the feeling that automation is the thing these days. For those of you who weren't at Chicago for the three exhibitions, the spread on pages 26 and 27 will give you an idea of what went on.

• **Caution Is the Keynote.** Two stories from Washington indicate this. Page 4 tells how uncertain business conditions are affecting capital spending plans. And page 12 outlines the caution of buyers, as denoted by a drop in new borrowing.

• **The NICB Has Come Up With a New Approach** to predicting buying trends. The new technique takes in all the basic factors affecting inventories and uses a computer to bring a definite trend to the fore. See the story on page 6 for the details.

• **The Case of the Moldy Cheese** is another instance where the American Arbitration Assn. lent a hand to bring peace in a dispute that threatened to erupt in a major business quarrel. How would you have solved this hassle on page 41?

Stamp Out Identical Bids, Antitrust Chief Urges

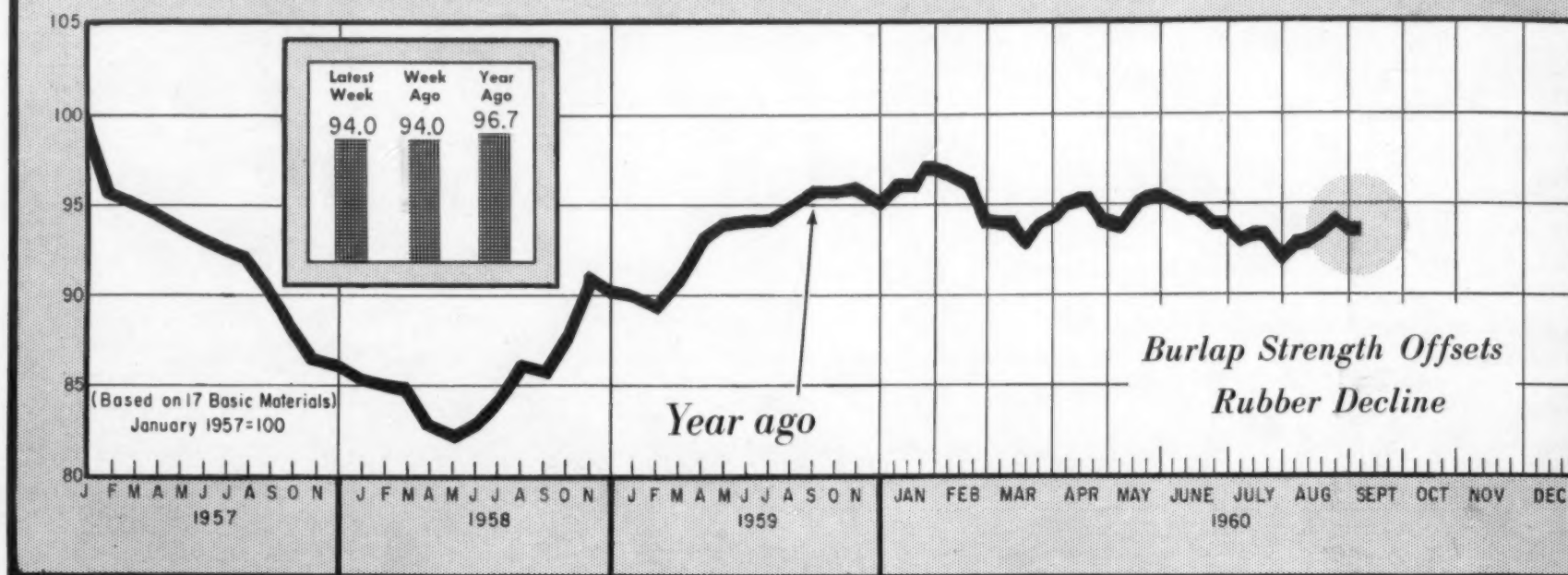
Kennebunkport, Me. — The government's top antitrust prober urged all P.A.'s last week to adopt a new Justice Dept. program that aims to stamp out the "plague" of identical bidding.

Robert A. Bicks, Assistant Attorney General who heads the

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Purchasing Week Industrial Materials Price Barometer

This index, based on 17 basic materials, was especially designed by the McGraw-Hill Department of Economics.



This Week's Commodity Prices

	Sept. 7	Aug. 31	Year Ago	% Yrly Change
METALS				
Pig iron, Bessemer, Pitts., gross ton	67.00	67.00	67.00	0
Pig iron, basic, valley, gross ton	66.00	66.00	66.00	0
Steel, billets, Pitts., net ton	80.00	80.00	80.00	0
Steel, structural shapes, Pitts., cwt.	5.50	5.50	5.50	0
Steel, structural shapes, Los Angeles, cwt.	6.20	6.20	6.20	0
Steel, bars, del., Phila., cwt.	5.975	5.975	5.975	0
Steel, bars, Pitts., cwt.	5.675	5.675	5.675	0
Steel, plates, Chicago, cwt.	5.30	5.30	5.30	0
Steel scrap, #1 heavy, del. Pitts., gross ton	30.00	31.00	38.00	-21.1
Steel scrap, #1 heavy, del. Cleve., gross ton	32.00	32.00	38.00	-15.8
Steel scrap, #1 heavy, del. Chicago, gross ton	32.00	32.00	40.00	-20.0
Aluminum, pig, lb.	.26	.26	.247	+5.3
Secondary aluminum, #380 lb.	.24	.24	.238	+
Copper, electrolytic, wire bars, refinery, lb.	.326	.326	.309	+5.5
Copper scrap, #2, smelters price, lb.	.255	.255	.255	0
Lead, common, N.Y., lb.	.12	.12	.13	-7.7
Nickel, electrolytic, producers, lb.	.74	.74	.74	0
Tin, Straits, N.Y., lb.	1.023	1.021	1.02	+
Zinc, Prime West, East St. Louis, lb.	.13	.13	.11	+18.2
FUELS†				
Fuel oil #6 or Bunker C, Gulf, bbl.	2.30	2.30	2.00	+15.0
Fuel oil #6 or Bunker C, N.Y., barge, bbl.	2.62	2.62	2.37	+10.5
Heavy fuel, PS 400, Los Angeles, rack, bbl.	1.95	1.95	2.15	-9.3
Lp-Gas, Propane, Okla., tank cars, gal.	.045	.035	.05	-10.0
Gasoline, 92 oct. reg., Chicago, tank car, gal.	.126	.126	.121	+4.1
Gasoline, 84 oct. reg., Los Angeles, rack, gal.	.108	.108	.112	-3.6
Kerosene, Gulf, Cargoes, gal.	.09	.09	.081	+11.1
Heating oil #2, Chicago, bulk, gal.	.095	.095	.091	+4.4
CHEMICALS				
Ammonia, anhydros, refrigeration, tanks, ton	94.50	86.50	86.50	+9.2
Benzene, petroleum, tanks, Houston, gal.	.34	.34	.31	+9.7
Caustic soda, 76% solid, drums, carlots, cwt.	4.80	4.80	4.80	0
Coconut oil, inedible, crude, tanks, N.Y. lb.	.145	.148	.188	-22.9
Glycerine, synthetic, tanks, lb.	.293	.293	.278	+5.3
Linseed oil, raw, in drums, carlots, lb.	.163	.168	.163	0
Phthalic anhydride, tanks, lb.	.185	.185	.165	+12.9
Polyethylene resin, high pressure molding, carlots, lb.	.325	.325	.35	-7.9
Rosin, W.G. grade, carlots, fob N.Y. cwt.	18.10	18.10	10.50	+72.4
Shellac, T.N., N.Y. lb.	.31	.31	.31	0
Soda ash, 58%, light, carlots, cwt.	1.55	1.55	1.55	0
Sulfur, crude, bulk, long ton	23.50	23.50	23.50	0
Sulfuric acid 66% commercial, tanks, ton	22.35	22.35	22.35	0
Tallow, inedible, fancy, tank cars, N.Y. lb.	.058	.058	.064	-9.4
Titanium dioxide, anatase, reg. carlots, lb.	.255	.255	.255	0
PAPER				
Book paper, A grade, Eng. finish, Untrimmed, carlots, cwt.	17.75	17.75	17.20	+3.2
Bond paper, #1 sulfite, water marked 20 lb. car. lots, cwt.	25.20	25.20	25.20	0
Chipboard, del. N.Y., carlots, ton	100.00	100.00	95.0	+5.3
Wrapping paper, std. Kraft, basis wt. 50 lb rolls	9.50	9.50	9.00	+5.6
Gummed sealing tape, #2, 60 lb basis, 600 ft. bundle	6.30	6.30	6.30	0
Old corrugated boxes, dealers, Chicago, ton	18.00	18.00	21.00	-14.3
BUILDING MATERIALS‡				
Cement, Portland, bulk carlots, fob New Orleans, bbl.	3.65	3.65	3.65	0
Cement, Portland, bulk carlots, fob N.Y., bbl.	4.18	4.18	4.18	0
Southern pine, 2x4, s4s, trucklots, fob N.Y., mftbm.	120.00	120.00	127.00	-5.5
Douglas fir, 2x4, s4s, carlots, fob Chicago, mftbm.	136.00	135.00	141.00	-3.5
Spruce, 2x4, s4s, carlots, fob Toronto, mftbm.	84.00	84.00	96.00	-12.5
Fir plywood, 1/4" AD, 4x8, dealer, crld, fob mill, msf.	64.00	64.00	68.00	-5.9
TEXTILES				
Burlap, 10 oz. 40", N.Y., yd.	.123	.121	.10	+23.0
Cotton middling, 1", N.Y., lb.	.325	.325	.331	-1.8
Printcloth, 39", 80x80, N.Y., spot, yd.	.194	.194	.195	-.5
Rayon twill, 40 1/2", 92x62, N.Y., yd.	.225	.225	.26	-13.5
Wool tops, N.Y., lb.	1.450	1.445	1.745	-16.9
HIDES AND RUBBER				
Hides, cow, light native, packers, Chicago, lb.	.172	.172	.295	-41.7
Rubber, #1 std ribbed smoked sheets, N.Y., lb.	.351	.358	.395	-11.1

† Source: Petroleum Week ‡ Source: Engineering News-Record

This Week's

Price Perspective

SEPTEMBER 12-18

THERE'S A QUIET ECONOMIC REVOLUTION going on in American buying habits—both industrial and consumer.

It's the growing emphasis on getting materials and products that stress a combination of function and cost—as opposed to expensive gadgetry and high styling.

For the consumer, the new trend can be traced back to the ever-rising cost-of-living. It has pressured the consumer to put greater and greater emphasis on savings in order to maintain his standard of living.

FOR THE INDUSTRIAL BUYER, the reasons are essentially the same.

On the material procurement level—increased management pressure to ease the cost-price squeeze automatically puts greater emphasis on savings.

On the finished goods procurement level—High labor costs make any type of custom-tailored product that much more expensive to purchase. This in turn, tends to discourage demand for non-functional "extras."

And then you can't discount the psychological factor. The dramatic switchover from shortages and general inflation to today's over-supply and buyers market has had its effect. It's created a climate where cost and price assumes a bigger and bigger role in the minds of both buyers and sellers.

Technology has provided the means for much of this change. Without the tremendous strides in new product development a lot of today's substitution would be impossible. Thanks to American ingenuity, steel, aluminum, plastics, and concrete often all vie for the same market.

THE STEEL-ALUMINUM STRUGGLE for the metal can market is a perfect illustration of the "functional approach" in industry today.

For the battle boils down to which metal can provide the biggest cost savings—and still do the job. The answer is, of course, still up in the air. But the metal that can do this may well capture the whole can market.

And this same battle is also being waged on a lot of other industrial fronts. Current stress on "value analysis", for example, is nothing more than a step-up in the search for cheaper ways of making the same product.

IN THE CONSUMER FIELD "function at lowest cost" is the major selling point of the compact car today.

And it's showing results. This year some 25% of all cars sold will be in the compact class. And next year that percentage—according to informed industry estimates will rise close to 40%.

The same trend is also clear in major appliance lines. The widely reported slump in this area is a selective one. Sluggish performance is generally limited to gadget-laden expensive lines.

Soft goods haven't escaped the new trend either. Cheaper apparel lines report brisk sales—in sharp contrast to the more expensive lines, which gather dust on dealer racks.

THE ANTI-INFLATIONARY EFFECT of this new trend are clear.

For the first time in history, prices have remained relatively stable during a boom period (mid-1958 to mid-1960). This is no accident. Buying on the basis of function has played a considerable role here.

Exactly how big a role, however, is hard to assess. For when cheaper Ferrolite replaces more expensive grades of tinplate, for example, industrial price indexes don't show any immediate change. That's because such indexes are slow to take account of changing volume of each grade sold.

So far the only hint available is in cars. Due to the impact of the compact, the average buyer is now paying 4% to 5% less for his new automobile.

Price Issue Hazy as Metals Duel for Can Market

New York—Aluminum and steel are playing trump cards in lightning succession in their struggle for the \$1.5-billion can market. Can purchasers stand to benefit.

The latest innovations include "Ferrolite," U. S. Steel's new thinner tin plate, and "Safe Pack," Alcoa's aluminum foil-paperboard laminate can. Right now attempts to determine comparative cost and quality are touching off a welter of claims, counterclaims, and cautious generalities. As one can company executive put it, "Can manufacturers and users are all working to determine what is the best pack for what contents."

The over-all situation is currently shaping up as follows:

• **Price:** The cost of cans made from the thin tin plate is still undetermined. Can manufactur-

ers compete with aluminum and Safe Pack for the frozen concentrates market, and with aluminum cans for oil products.

These are markets where relative rigidity—Ferrolite's big advantage—is not too important. Competition will probably center on comparative cost.

Other factors are:

• Aluminum's advantages in being rust free and easier to print on.

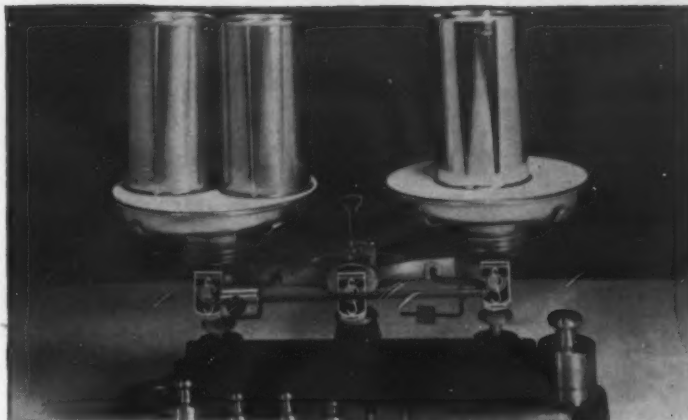
• Aluminum companies providing customers with can-making outfits to process aluminum

can stock, thus by-passing can manufacturers.

• Steel's stable pricing history which may appeal to customers who are wary of aluminum's ability to continue supplying can stock and stable prices.

In other areas where rigidity is important, Ferrolite should expand its use at the expense of conventional tin cans.

Safe Pack, which is much less rigid than tin plate, may find promising markets in the packaging of powdered goods, such as soaps and detergents.



THINNER TIN: Two cans made of U. S. Steel's 'Ferrolite' weigh only as much as one made by the old process using standard gage tin plate.



TWIST OF THE WRIST whisks the top from Alcoa's 'Safe Pack' can.

ers are running pilot production lots to determine how much of the savings from the lower cost of the new material can be passed on to customers.

Ferrolite ranges from \$6.10 for the 45-lb. base box up to \$6.65 per 60-lb. base box. These prices compare with the standard gage tin plate weighing 80 lb. to 100 lb. per base box, and selling at about \$9.00 for the latter.

Can manufacturers are reported to be experimenting primarily with the 55-lb. Ferrolite which sells for \$6.40 to \$6.50 per base box. This would indicate that savings in tin plate costs to can manufacturers could run about 20% to 25%.

Not all of this material saving can be translated into a matching price cut, since production costs involve many other factors in addition to tin plate costs. But even a 7½% price cut in 6-oz. tin can prices would make them competitive with aluminum cans.

Safe Pack, introduced with a tear-off top, may heighten price competition when it gets into commercial production. Right now this latest can innovation is described as in "the experimental pricing stage."

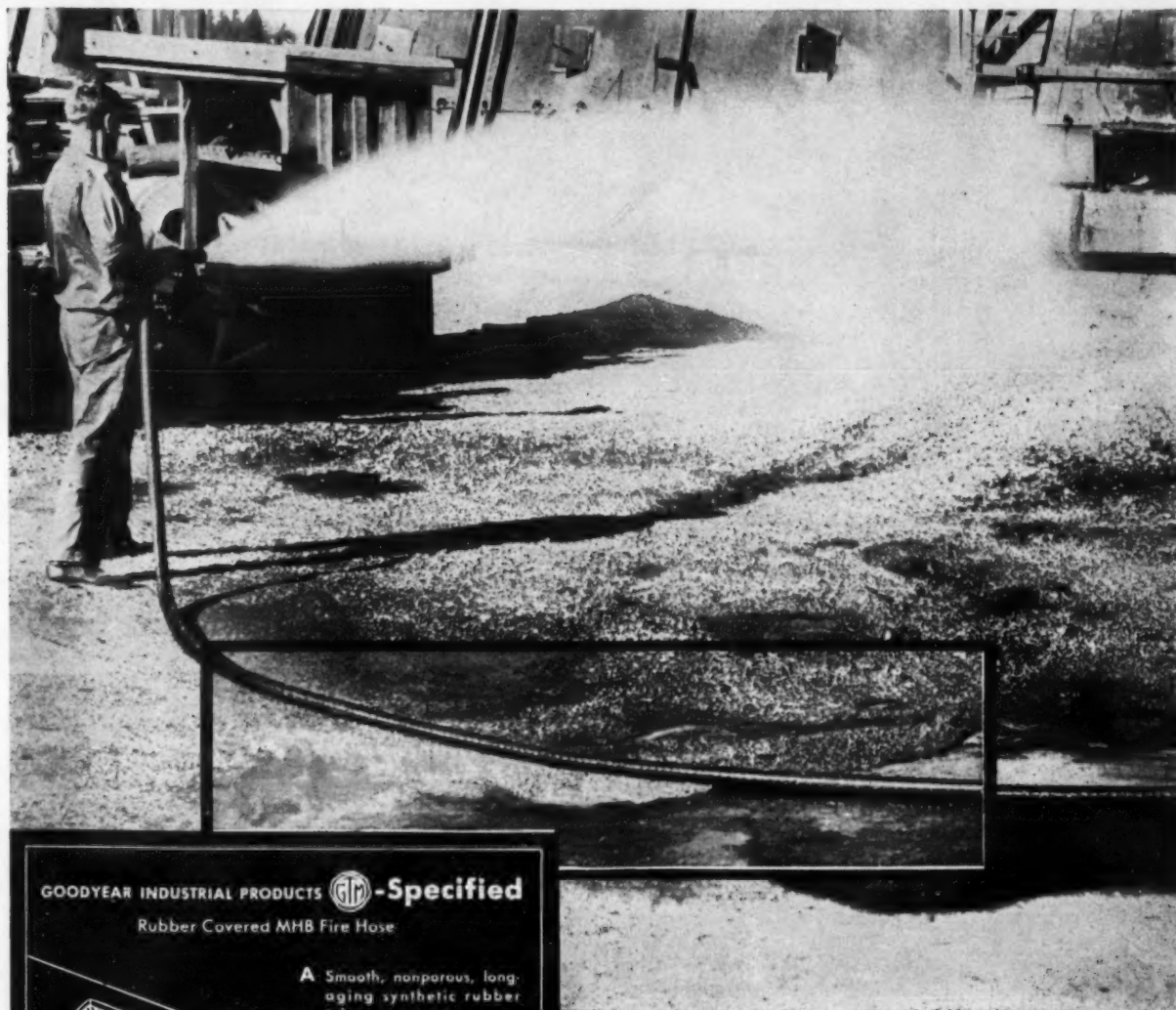
• **Weight:** This is an important consideration because of possible savings in freight charges and shipping costs through the use of lighter containers.

Aluminum can stock still runs lighter than the Ferrolite tin plate, but its former weight advantage has been drastically cut.

But, again, the Safe Pack foil-paperboard laminate may recover much of the weight advantage because it's even lighter than full-bodied aluminum.

• **Uses:** Ferrolite cans should

Salt-water diet gave fire hose ulcers at this West Coast lumber company. Never drained, never dry, the hose was often run over by heavy lift trucks, gave up in 9 months. Then the Goodyear Distributor and the G.T.M. (Goodyear Technical Man) proposed a sure-fire solution—Style MHB Fire Hose. Flexible and light, it's synthetic-fiber-reinforced for extra strength, fights off oil, rot, mildew, hard knocks. At last look, it showed no wear after two years of daily service.



GOODYEAR INDUSTRIAL PRODUCTS **G.T.M.**-Specified
Rubber Covered MHB Fire Hose

- A Smooth, nonporous, long-aging synthetic rubber tube
- B Single horizontal-braided construction combines strength with light weight and maximum flexibility
- C Synthetic rubber cover resists oil, mildew, abrasion, sun, aging

When the heat's on, call in your *first team* — your Goodyear Distributor and the G.T.M. Whether it's Hose, V-Belts, Conveyor Belts or any other industrial rubber product you need, you'll get fast action and the right answers from this pair. They're both listed under "Rubber Products" or "Rubber Goods" in the Yellow Pages. Or write Goodyear, Industrial Products Division, Akron 16, Ohio.

Lots of good things come from

GOODYEAR
THE GREATEST NAME IN RUBBER

Business Grows Cautious; Cuts Capital Outlays

Washington—The Senate Antitrust Subcommittee turned the spotlight on antibiotics producers last week and immediately charged them with monopoly, price fixing, and high profits.

Sen. Estes Kefauver, who heads the committee, attempted to bring out the same pattern he had tried to show in tranquilizers, steroid hormones, and anti-diabetic drugs.

As the hearings got underway, Kefauver's investigators were also expected to disclose that the Armed Forces are buying drugs from foreign countries, particularly Italy, for savings of more than 50%.

The antibiotic tetracycline, for instance, has been purchased for \$8.15 per bottle of 100 compared with a low domestic price of \$17. The U.S. industry argues that this is possible only because the Italians are parasites in the drug business—with no patent laws of their own they have done no research and have not developed a single new drug.

Sees Monopoly Through Patents

Kefauver charged that prices on four broad-spectrum antibiotics—*aureomycin*, *tetracycline*, *terramycin*, and *choloromycetin*—remained the same from 1951-60 while prices of *penicillin*, on which there is no patent monopoly, were dropping. American Cyanamid Co. and Parke Davis & Co. between them control 46.7% of the consumer market for leading antibiotics and 64.7% of the market for hospitals.

American Cyanamid President W. G. Malcolm felt the company should be complimented for holding prices at the same level while labor costs rose 90% and equipment costs 40-50%. Prices by different companies were identical, he said, for the same reason gasoline prices are identical at neighboring stations—keen competition.

Dr. Malcolm said the company feels a 15% average profit on net sales—three times the average for all industries—is necessary in a business with high research costs and high risks of obsolescence. Kefauver pointed out that the 15% figure represents profits after all costs including research.

Malcolm said the company could have charged more for *decalmycin* and *tetracycline* than for *aureomycin* because it is a superior product for many purposes "but we refrained from doing so." Kefauver considered this just more evidence of the industry's ability to set prices regard-

less of such market conditions as the falling demand for *aureomycin*.

Dr. Malcolm told the committee American Cyanamid had cut prices on *aureomycin* 66% in the first three years it was on the market. Later antibiotics were introduced at the same price and held there for 10 years until a 15% cut made just weeks ago in the face of new competition.

"There is a limit to the amount by which you can reduce the price of a drug," he said, "and we felt we had reached these limits in 1951." He said the successful drugs have to make

enough money to cover losses on less successful ones. He cited the company's \$12.5-million investment in live polio vaccines which largely went down the drain when the government accepted a competing strain for licensing.

Antibiotics constitute the largest single segment of the ethical drug industry with a sales volume of \$700-million annually. All the leading broad spectrum drugs are patent monopolies.

The Kefauver committee expects to hold one more set of hearings, on a variety of drugs including vitamins and sulfa, then turn to specific legislative proposals.

New Plant & Equipment Spending

Seasonally Adjusted Annual Rates
(Billions of Dollars)

	1960		
	Apr.- June	July- Sept.	Oct.- Dec.
Manufacturing	14.70	14.6	14.8
Durable goods industries.....	7.40	7.3	7.3
Primary iron and steel.....	1.60	1.6	1.6
Primary nonferrous metals.....	.30	.4	.4
Electrical machinery and equipment.....	.65	.7	.7
Machinery, except electrical....	1.15	1.1	1.2
Motor vehicles and equipment....	.90	.9	.9
Transportation equipment, excluding motor vehicles.....	.40	.4	.4
Nondurable goods industries.....	7.30	7.3	7.5
Food and beverages.....	.90	1.0	1.0
Textile-mill products.....	.50	.6	.6
Paper and allied products.....	.75	.8	.8
Chemicals and allied products....	1.60	1.6	1.7
Petroleum and coal products....	2.70	2.5	2.5
Mining	1.05	1.1	1.1
Railroads	1.10	1.1	1.0
Transportation, other than rail.....	2.15	2.2	2.2
Public utilities	5.70	6.0	6.1
Commercial and others.....	11.60	11.9	11.9
Total	36.30	36.9	36.9

Steel Centers Turn to Cost Cutting; Promise No Reduction in Services

(Continued from page 1)

not. In fact, many claim they are now offering more special services, such as cutting to size, burning, grinding, and coating of sheets, than ever before.

These are the methods the service centers have begun to adopt:

• **Automation.** Most firms are installing equipment such as stacker cranes, conveyor systems, the latest material handling equipment and automatic banding machinery.

• **Manpower Reductions.** Most companies have cut back on the number of their employees—primarily by not hiring replacements, rather than by widespread layoffs. The net effect has been a 10% cut in the industry's 40,000-man labor force.

• **Inventory Reductions.** Based on re-evaluations of the so-called "cost of possession," service centers are now reducing inventories in an effort to boost annual turnover. With present inventory down to 3.4-million tons, 1960 turnover could hit 2.15-million if sales reach 7.3-million tons.

• **Advertising Cuts.** In addition to cutbacks in advertising, ware-

houses are keeping a tighter grip on executive expense accounts, abandoning the time-honored tradition of novelty giveaways to customers and chopping the number of trade show appearances.

"We're even watching the number of pencils used," said one warehouse executive, whose firm cut back on advertising 10%.

Making Plant Surveys

Another firm, Chicago Steel Service Co., is surveying its plant operations to find out if there is some way to reduce labor costs further through automation. The company saved some money this summer by not hiring part-time help during vacation.

Harris Steel Co. is trying to automate wherever possible, as is A.M. Castle & Co. Rolled Steel Corp. is reducing its work force to a "practicable minimum."

In the Northwest, where steel centers have signed new contracts with the Teamsters' Warehouse Union providing for 36¢/hour wage increases over 3 years, most companies, including Ryerson, U.S. Steel, and A.M. Castle, said they were preparing to go ahead with large scale cost cutting programs, similar to those reported by Chicago and Cleveland warehouses.

This Week's

Washington Perspective

SEPT. 12-18

The "old lady of Pennsylvania Avenue"—a nickname often stuck on the Federal Trade Commission has been showing a lot of life lately.

While the FTC doesn't have much power, developments springing from some recent actions have been having important effects on prices and business trade practices. For example, note these two decisions last week:

• **Price fixing:** A court decision on an FTC complaint appears to have added another side to price-fixing law and the severity with which violations will be judged.

The case involves Coca-Cola and six other Washington soft drink bottlers who were indicted on charges of conspiring to set prices.

Coca Cola was the only one of the defendants to plead innocent. But after consultation with the court and the other defendants, Coca Cola, like the others named in the case, switched its plea to *nolo contendere*.

The reason: The court appeared to indicate that a big factor in passing judgment would be how long the defendants had been engaged in collusion.

If attempts at price fixing are discovered quickly and stopped, the reasoning appeared to be that the court would take this into account in assessing penalties. Sentencing will come next month.

• **Advertising:** The commission also has been taking a closer look into the advertising practices of home appliance makers.

The FTC last week moved against refrigerator makers. It warned manufacturers they could be laying themselves open for commission action if they advertise about gross capacity instead of actual food-holding capacity of their boxes.

• **The nationwide system of truck trailer interchange is working out well.**

Trailer interchange is similar in operation to the interchange of boxcars by railroads. Many bugs still have to be worked out, but the trucking industry feels the system is on the right road.

The American Trucking Association estimates the 580 truck lines participating in the program inaugurated last year have already saved \$50-million in load by transfers and reduced transit time by 20%.

ATA officials say shippers are enthusiastic about the shorter delivery times and that this gives them more flexibility in production and delivery planning.

• **Congress is out of session but Comptroller General Joseph Campbell is keeping up the drumfire attack on military purchasing while the lawmakers are away.**

Latest target of Campbell's General Accounting Office, Congress' investigatory arm, is the Army.

Campbell claims the Army's aviation supply program is so poorly managed that the service's planes often are grounded for lack of spare parts. And those parts the Army does have on hand are often way overstocked, according to the GAO report on the Army Transportation Materiel Command in St. Louis.

According to a GAO audit, the Army is buying twice as many spare parts as it needs. The command actually has on hand a \$22-million inventory, of which almost \$12-million is "excessive," Campbell says.

The Army admits that Campbell's charges are generally correct. The service says, however, it is still in the process of developing its aviation supply service and that corrections are being made.

Late News in Brief

Rails File Rate Hikes

Washington — The nation's railroads filed proposals with the Interstate Commerce Commission last week for across-the-board freight rate increases of 1%, due to take effect Oct. 24. The ICC has scheduled hearings on the rate hikes for Oct. 18.

Work Rules Study Set

Chicago—Railroad management and labor agreed last week to allow a special subcommittee to decide whether or not the findings of a work rules study commission should be binding on both sides. While both the unions and railroad leadership had

agreed to allow the study commission to propose possible settlements on the work rules issue, the unions had flatly decided against being bound by any of its findings. The subcommittee will now lay down the ground rules for the study commission.

Anaconda Names New Purchasing Head

New York—Anaconda Wire and Cable Co. last week appointed Cleal F. Randall to the new company post of vice president, purchasing and inventory control. Randall's appointment was announced by President Richard B. Steinmetz.

Bigelow-Sanford Erases Last March's Price Hike

New York—A 5% boost posted last March by Bigelow-Sanford, Inc. on one of its commercial carpet lines has been canceled. The company said the move cuts 42¢ a sq. yd. from the price of its Gropoint line.

Lowell P. Weicker, Bigelow-Sanford president, said he doubted the price reduction would signal an industry-wide move toward lower prices.

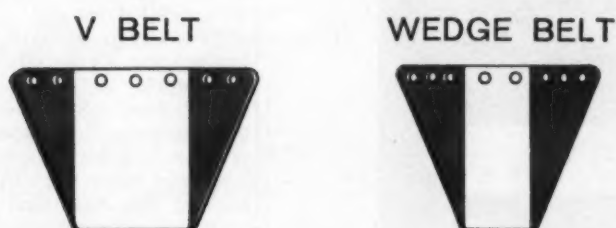
"We have been a little above prices of our competition on this line," he explained. "We have moved to meet the prices of our competition."

HAVE YOU TAKEN SIDES IN THE BELT DRIVE REVOLUTION?

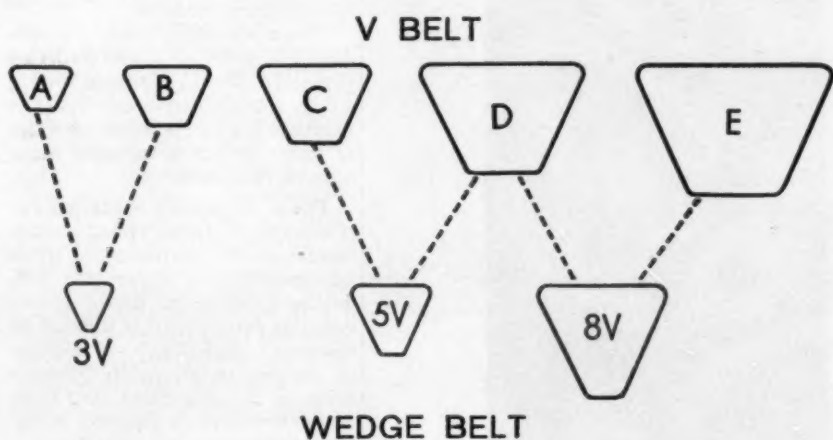
The change from Multi-V to Multi-Wedge is revolutionizing belt drives. A simple change in shape gives the Wedge Belt greater efficiency. Thus the number of belts can be less, diameters can be reduced 30 to 50% and center distances cut 20% for the same transmitted horsepower. In fact, Multi-Wedge drives result in initial savings up to 20%.

Because of this potential saving, it's to industry's advantage to design Wedge-Belts into new equipment as soon as convenient. But Worthington will supply complete requirements in both Multi-V and Multi-Wedge drives until the latter has completely taken over.

Are you worried about interchangeability of brands? Frankly, five out of the eight leading drive manufacturers now offer Multi-Wedge, as well as the Multi-V drives.



The cord layer near the top of either belt carries the load. This layer is, however, only efficient in the portion supported by side walls (red areas). Because more of its top section is over the side walls, the Wedge belt is more efficient than a V belt.

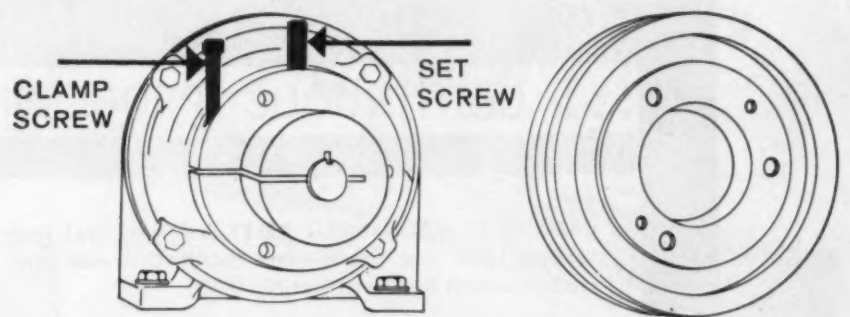


Because the smaller Wedge belt does more work, the number of sizes have been reduced without loss of flexibility. The new Wedge belts are available in three standard sections: 3V, 5V and 8V. Stock 3V and 5V sheaves cover horsepower ranges through 200 hp. Made to order 8V sheaves will be used for 200 to 2,000 hp. requirements.

And so far, all Multi-Wedge drives are offered in the same belt and sheave sizes.

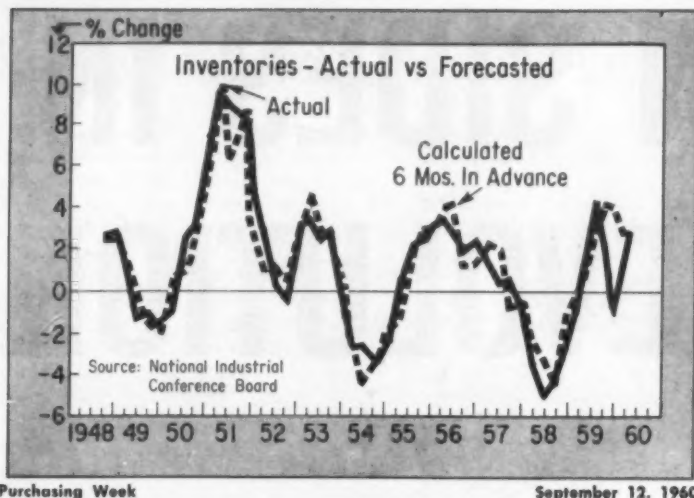
There is, however, an important reason for preferring the Worthington Multi-Wedge drive. Worthington makes the QD (Quick Detachable) sheave—the industry's largest seller—in the complete range of Multi-Wedge standardized dimensions. This sheave, with its two Golden Screws, appeals to plant operators because of its positive locking arrangement—easy on... easy off... always tight.

For Multi-Wedge drives, Worthington maintains a large stock of its QD sheaves and Worthington-Goodyear Wedge belts from coast to coast. For information call your Worthington distributor listed in the yellow pages of your phone book. Or write Worthington Corporation, Section 79-28, Oil City, Pennsylvania.



Worthington QD sheaves are preferable for Multi-Wedge drives. The clamp screw simplifies installation, assures permanent alignment, and makes it possible to use a set screw without causing hub distortion that might cause eccentric runout. The set screw prevents "key drift" by locking the key securely in place. You install QD sheaves easily—one part at a time. If change in speed is required, you simply install another sheave on the hub which remains anchored to the shaft.





NICB Works Out New Technique

New York—The National Industrial Conference Board has developed a new mathematical formula that may answer many of the questions that plague P.A.'s when they're trying to figure out future buying trends.

The new technique analyzes all the factors that affect inventories, throws them into the computer hopper, and then comes up with a forecast of what the general inventory picture will be like from three to six months hence.

The new approach has already been used successfully in pin-

pointing over-all inventory stock trends. This success is graphically illustrated in the chart at left, which compares actual changes in business inventories with forecasts made six months before.

Statistically speaking, some 89% of all the variations in inventory changes over the period shown here can be explained by the new formula—a very satisfactory score for this type of problem, in the opinion of most experts.

But that's only a beginning. According to the NICB, the new

approach can eventually be developed to the point where you can use it to forecast specific industry trends—and perhaps even specific types of inventory.

Factors Affecting Inventory

The method—as outlined in the NICB's Technical Paper #8—is basically mathematical in approach, but relatively easy to work with. It takes into account the major factors that affect inventory accumulation:

Inventory/Sales Ratio. This comparison of inventories to sales is usually a pretty good indicator of which way stocks will go in the future. In fact, PURCHASING WEEK has been using this basic ratio as one of its regular indicators of future business activity.

It's easy to see why this barometer telegraphs changes in buying. When the ratio is high, it means that day's supply is above normal. As such, it's reasonable to expect some pressures to reduce inventories.

On the other hand, relatively low ratio means a low days' supply. This, in turn, suggests a need to raise inventories.

It usually takes several months to translate the need to raise or lower inventories into inventory action.

The chart above, right, reveals a close degree of relationship between the current ratio and inventory changes three months later.

New Order/sales. This ratio also proves quite useful in forecasting inventory trends. For when bookings are running above sales, it indicates future business is being built up. And, as such, some inventory accumulation seems called for.

Conversely, when orders run below sales, it's an indication that the future is not too bright. Under these conditions, it's not unreasonable to expect some pressure to reduce inventories.

The Conference Board examined the ratio and found a pretty close correspondence between it and future inventory changes. Thus, when the ratio went up (or down), inventories followed in the same direction after a lag of a few months.

A third important factor examined was the trend in backlogs of unfilled orders. This represents the reservoir of future work at any given moment.

When it's high, there's a tendency to build up stocks and vice versa. In the Conference Board study, the unfilled order figure is expressed as a percent of sales in order to put it in more manageable relative terms.

Price. Generally speaking, expectation of future price trends should create incentives for stock accumulation or depletion. But, as the Conference Board points out, this price factor is difficult to measure statistically—because of the interrelationship between price on the one hand, and sales and new orders on the other hand.

Nevertheless, the NICB analysts feel that "price expectations latently carry a much greater significance for inventory policy than can now be established from the statistical record."

Business Composition. Since each industry has its own unique inventory/sales ratio, a change



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Whether you're designing machinery for your own use, or for resale, the Cambridge Field Engineer in your area will be glad to discuss the many advantages of Cambridge Belts—from the manufacturing end to installation and service. Call him today. He's listed in the yellow pages under "Belting, Mechanical". Or, write for FREE 130-PAGE REFERENCE MANUAL.



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Manufacturers of Wire Cloth, Metal-Mesh Conveyor Belts, Wire Cloth Fabrications

to Forecast Future Buying Trends

in the over-all industry product mix can automatically bring about a difference in aggregate inventory figures.

The Board estimates that some 15-20% of short-term inventory changes can be attributed to the changing product mix.

Two other inventory-affecting forces are also noted in the study: interest rates and liquidity.

On the basis of economic theory, higher interest rates raise inventory costs—and might tend to discourage accumulation. Lower interest rates, of course, work in the opposite direction.

Liquidity, or availability of funds, should also be directly related to inventory policy. Inventory pressures—on the basis of business procedure—should vary directly with the amount of funds a corporation has in its tills.

The Technique

The NICB attempts several mathematical solutions—using the above determinants of inventory change.

The one yielding the best results makes inventories dependent upon (1) the inventory/sales ratio; (2) the new order/sales ratio; and (3) the ratio of unfilled orders to sales. Solutions based upon the above factors are obtained for inventory trends three to six months in advance.

It is the latter solution which is shown in the chart, upper left. The close coincidence between actual and forecasted inventory changes attest to the value of this approach.

The forecasts found in that chart are based on an "estimating equation" derived via the techniques of multiple correlation. This equation indicates changes in inventory which may be expected on the basis of specific trends in the three ratios noted above.

The actual equation on which the six months inventory forecast is based is reproduced immediately below.

$$Y = -17.64 - 25.26 X_1 + 55.31 X_2 + 2.88 X_3$$

Where:

Y = percent inventory change 6 months hence.

X₁ = inventory/sales ratio at the beginning of a 6 month period.

X₂ = the new order/sales ratio in the quarter immediately preceding the 6 month period.

X₃ = the ratio of unfilled orders to sales at the beginning of the period.

Interpretation

Here's a brief explanation how to use the above equation for predicting total business inventories—or more specifically—how to use the numbers appearing in front of X₁, X₂, and X₃.

Take, for example, the number in front of X₁. Each 1 point change in the inventory sales ratio (X₁) results in a .25% change in the rate of inventory accumulation (Y) over the ensuing six months.

If, for example, the ratio goes up 5 points—from 1.46 to 1.51—we can then expect an inventory change of —.25% (5). That's a decline in inventories in the order of 1.2% over the next six months.

A similar type of analysis can give the effect of changes in the new order/sales and unfilled order/sales ratios.

Conclusion

The NICB points out that much work remains to be done along the above lines—both for

over-all economy inventories and for specific industries.

Incorporation of other inventory-determining forces, for example, could conceivably lead to even more accuracy.

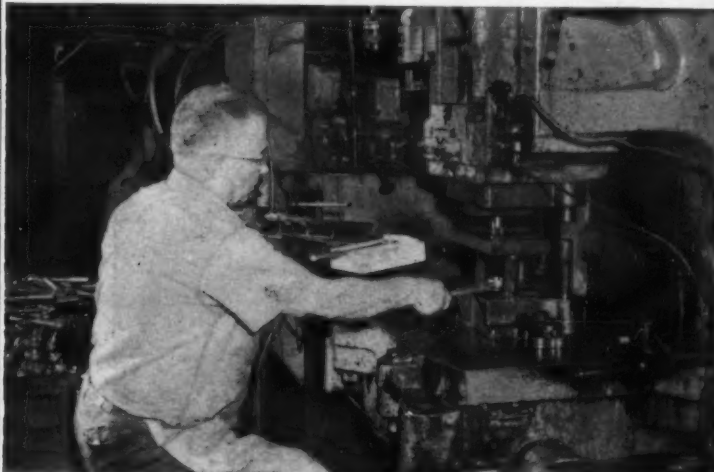
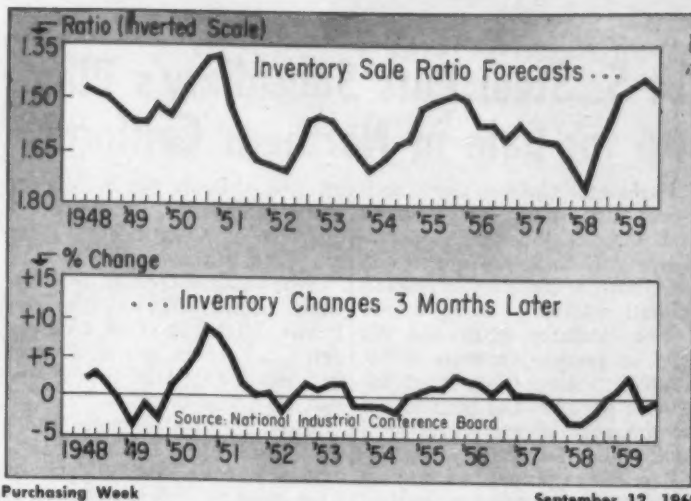
But whether it does or not, the fact remains the Board has come up with an approach which is basically new. It points the way to a practical method of calculating inventory trends 3-6 months in advance—something that has been needed for a long time.

The Board feels that "as long

as the underlying conditions remain essentially as they were in the post-war period, the formulas constructed here . . . should continue to produce useful measurements of current inventory tendencies . . ."

Further details on this new method are available in "Technical Paper No. 8" of the National Industrial Conference Board, 460 Park Ave., New York 22, N. Y.

Cost per copy is \$3 for Associates of the Conference Board. For Non-Associates price is \$15.



Teeth in ratchet head and socket openings are induction heated for hot forming without tears or ruptures. Over-heating of steel is avoided and decarburization is prevented. Unusual accuracy is attained and the grain structure of the metal remains unbroken.



Completely machined ratchet and socket blanks are heated and quenched in a series of salt baths to develop the proper relationship of toughness and hardness without decarburization or dimensional distortion.

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U. S. Steel Puts Subsidiary's Plant Up for Sale in Northern California

Berkeley, Calif.—The fabricating and pipe making plant of Consolidated Western Steel, division of U. S. Steel Corp., is up for sale, company officials pointed out.

The Berkeley plant has not been in production since 1956, although a large portion of the 11-acre property has been leased for the past several years to a truck trailer fabricator.

Part of the property, including some office space and more than

an acre of land, will be retained as the Northern California headquarters of Consolidated Western's construction department.

Pipe manufacturing facilities were transferred to the new Provo, Utah, plant of Consolidated five years ago in a move that merged all the firm's pipe making operations.

The sale will include more than nine acres of land and buildings with about 150,000 sq. ft. of floor space.

Hardboard Industry Opens 'Buy-American' Drive

Chicago—The domestic hardboard industry has opened a Buy-American campaign in an attempt to block further market inroads by foreign suppliers.

The program, sponsored by the American Hardboard Assn., cites the advantages of U.S. hardboard industry including quick deliveries, technical service, brand merchandising, and high standards.

U.S. hardboard producers claim their foreign counterparts have captured about 12% of the U.S. market. They said that im-

ports at the present time are priced 15% to 35% under U.S. offerings.

The Buy-American campaign will be plugged through industry advertising and a "Plus Values" fact kit being distributed as a sales aid to sales departments of U.S. producers.

As part of the program, the AHA is preparing a series of case histories of buyers who have had difficulties as the result of purchasing foreign hardboard.

The cases will point to these problem areas:

- Goods damaged in transit with no claims adjustment.

- Heavy inventory costs because buying is tied to seasonal operations.

- Lack of technical service.

- Quality problems in thickness and coloration.

By promoting their own products, U.S. manufacturers hope to stem the flood of hardboard imports from Sweden and other countries, which last year totaled 281-million sq. ft. Ten years ago, imports totaled only 15-million sq. ft. Industry sources fear that without some promotional program, U.S. industry may lose 30% of its market in the next decade.

Exports Fall Hard

During the past 10 years, exports of U.S. manufacturers have fallen from 6% to 1% of sales, as production almost doubled from 900-million sq. ft. in 1950 to about 2-billion sq. ft. last year.

"As a result of failure in eight years of effort to secure reasonable assistance through the various agencies of the government to our problem, our industry has initiated the 'Plus Values' program," declared Donald Linville, AHA executive secretary.

"We do not seek unrealistic high tariffs, or unreasonable quotas because that would be impossible.

"Through this program we hope to persuade the buyer of hardboard both in the building material field and the industrial user, that it is to his advantage to purchase, stock, and sell hardboard produced by a domestic manufacturer."

Hardboard was the first industry to obtain an anti-dumping ruling from the Treasury Dept. in 1954.

Wabash Crosses Northern Border Without Delays

Buffalo—The U.S. and Canadian Customs services are allowing freight cars to travel the Wabash Railroad between Buffalo and Detroit without stopping for inspection.

The new system, initiated at the request of the Wabash, involves sending teletype messages to the inspection points when the trains are made up. The messages list the contents of each car in order, and are used by inspectors at Ft. Erie for a check list as the trains move by at 5 mph. The train is halted if any cars have been added or removed.

This system involves the trains traveling between Detroit and Buffalo via Windsor and Ft. Erie. Since they are actually traveling between two U.S. points there is no duty involved and one principal reason for the inspection is to assure that no cars or cargo originating in Canada comes in through this free clearance.

Before the teletype system, the inspection sometimes delayed trains for several hours. The same system is used by inspectors at Windsor for trains traveling from Buffalo to Detroit.



calls the class to order!

Purchasing Agents—be seated! Today's lesson concerns itself with the three "E's": Efficiency...Economy...Exclusives. The subject matter: the wonderful staplers seen on more desks across the nation than any other kind—SWINGLINE! First, Efficiency: SWINGLINE makes a stapler for your every possible office need—even that special one you've been wanting to purchase all along. There's the completely automatic electric stapler that requires only a feather touch to turn out tons of fastening work. If you want to purchase a master desk stapler, SWINGLINE's No. 4 is a paragon of efficiency—and it holds 210 staples, too! The No. 3 is a shorter desk model...the No. 27 a rugged model that can be hand-somely imprinted with your company name. For efficiency plus versatility, the No. 77S does a 4-in-1 job: staples, tacks, pins, fastens—and stores a whopping 500 staples! Purchasing for a small office? SWINGLINE has designed the compact No. 99 specifically for the smaller office—yet it holds 105 staples for ready action. Second, Economy: Every SWINGLINE stapler is sensibly priced—and that's the important fact for persons with your responsibility! Third, Exclusives: only SWINGLINE staplers guarantee split-second loading (thanks to the exclusive open channel!) and jam-proof performance! There are brilliant Jeweltone colors to choose from, ultra-modern designs to enhance any office decor. But trying is believing—how else can you really know how efficient, economical and special SWINGLINE staplers are! That's why the President of SWINGLINE is making this offer: just dial Stillwell 4-8555, discuss your stapling needs and problems, and SWINGLINE will send you the stapler that answers your individual need—for a FREE 10-DAY TRIAL. There's no obligation, of course. Try it...see how it works...how easy and efficient SWINGLINE is! If you're completely satisfied—and we think you will be!—just call to order—and we'll do the rest for you. Class dismissed. Now put SWINGLINE to the test!

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County Finance Officers in Florida Ponder Problem of Identical Bids

Jacksonville, Fla.—The problem of identical bidding was the dominant topic of conversation—and official discussion—at the annual three-day convention of the Florida County Finance Officers Assn. here.

While some county P.A.'s merely condemned the practice and urged stronger assistance from the Justice Dept., others at the meeting suggested possible ways to hurdle the same-price barrier.

"We picked one bidder on identical bids and gave him the order instead of rotating, as some may do," reported D. W. Sanderson, Jr., Palm Beach County purchasing agent. "In this way we eventually got competitive bids."

Cooperative Purchasing

"Cooperative purchasing also helps in getting competitive bids and better prices," said Fred Flanders, purchasing agent of Broward County. "We started with the municipalities, later the smaller places and the county joined in."

He cited petroleum products as one classification where substantial savings were made. The largest requirement for any one political division was 200,000 gal. annually. By pooling requirements, he said, the quantity was raised to more than a million gallons a year. The savings totaled \$13,000.

Purchasing Meetings

Another purchasing trick which works very well in Palm Beach County, according to Sanderson is to invite representatives of competitive manufacturers to a meeting at which each one explains the merits of his equipment.

"We get a wealth of technical advice," said Sanderson. "The meetings are void of the sales pitch. Anyone who makes an exaggerated claim is subject to criticism by all other salesmen."

Further discussing cooperative buying, Flanders said there are some things on which buyers cannot pool orders. There is the question of timing, he reported. "Things that are needed in a hurry are usually purchased from local distributors," he said.

Items on which the Broward County cooperative buying has been most successful include tire recapping, batteries, autos, mobile radios, air conditioning equipment, and building materials.

Small Buyers Benefit

Flanders noted that five municipalities, the county commission, and the county school board are now in on the cooperative buying program. Other towns are ready to join, he said. The smaller buyers get a greater benefit from pooled purchases than the larger ones, but all benefit to some extent from the arrangement, he said.

Another problem discussed at the Sept. 1-3 meeting was that of elected officials circumventing the purchasing department in placing orders. One suggestion to correct this situation was put the name of the official on any purchase order that does not go through the regular channels. "Thus," reported one buyer, "the responsibility for any failure of the item is not on purchasing."

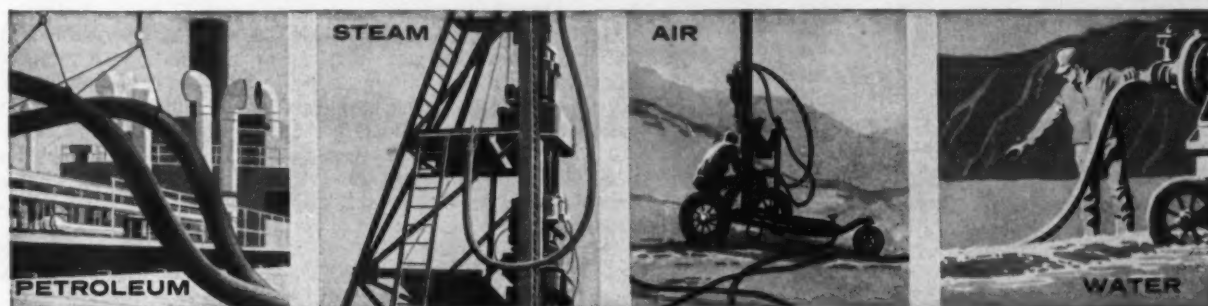


DEERE DEALERS IN DALLAS: More than 5,000 dealers, airlifted to Dallas, buzz through huge equipment exhibit in Cotton Bowl parking area.

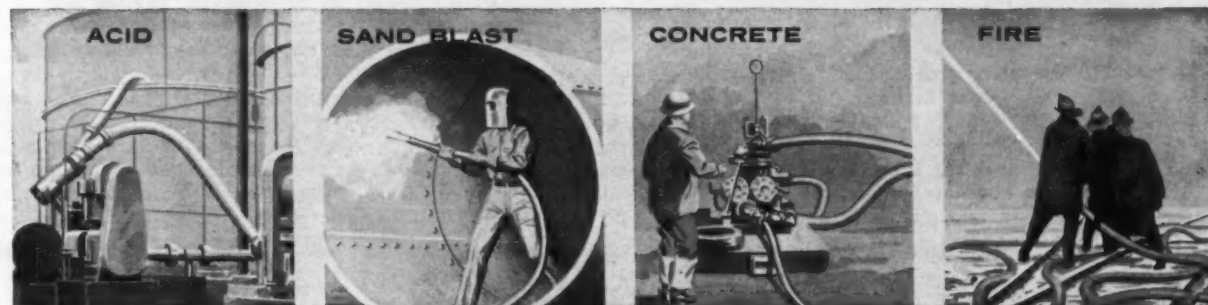
Deere Airlifts Dealers

Dallas—More than 5,000 dealers from all over the U.S. and Canada were air lifted into Dallas August 30 by Deere and Co. for a day of product introduction and demonstration. A company spokesman said both chartered and regularly scheduled planes were used in what was probably the greatest commercial mass flight on record.

The dealers saw one of the most elaborate industrial shows ever staged by a single firm, with Deere exhibiting \$2-million worth of industrial and farm equipment. The exhibit filled the parking area at the Cotton Bowl.



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The BOSTON line includes standard and custom-built hose from 3/16" to 42" I.D. Each hose is manufactured to exacting quality standards prescribed by our progressive Research & Development Department. They assure you a superior hose for your most rigid requirements. BOSTON means honest value, top performance—the best hose for your needs. Let us demonstrate how BOSTON serves you best!

Vacuum Ashtray

Detroit—A combination trash receiver and ash tray that operates from a car's vacuum system will soon be marketed by an auto manufacturer. The device connects to the car's intake manifold and is designed so that the vacuum is applied only when the tray drawer is fully opened. Price, installed will be about \$13.



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BOSTON WOVEN HOSE & RUBBER DIVISION
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P/W MANAGEMENT MEMOS

A collection of timely tips, quotations, and inside slants on management and industrial developments, along with a run-down of events and trends of use to the purchasing agent.

World Series Fever

American businessmen are bowing gracefully to the inevitable by allowing employees to listen to World Series broadcasts during working hours, says Industrial Relations News.

In a survey of 24 companies, this personnel management service found that six permit their public address systems to be used to relay the latest scores, and 18 allow employees to bring their own radios to work.

Management apparently has solved the problem of baseball pool betting in plant or offices by the simple method of just looking the other way. None of the 24 firms surveyed officially approves the practice, but 16 know that the pools exist—and aren't doing anything to stop them. One firm, Yale & Towne, has gone one step farther—it sanctions the baseball pool, because the money goes to buy a radio for series listening. The winner of the series pool wins the radio.

Creeping Senility

The notion that a man is through when he reaches a certain age, say 40, is under attack from various quarters these days, but nowhere so effectively as by a group who call themselves the Forty Plus Club.

The Club is made up of unemployed executives age 40 or over, who have banded together to help each other get new jobs. The Club's motto: There's no substitute for experience.

Each man contributes two and a half days a week until he gets placed helping other executives find jobs. Club dues are nominal, and there's no placement fee. However, besides contributing their time, most men make a gift to the club to help finance the services. Once a man gets a job, he becomes an "alumnus", or associate member.

The club is exclusive in the sense that "members" must have been high-level managers, earning over \$8,500 a year, and pass skill and psy-

chological tests, and cooperate with fellow members in their job hunt.

You'll find Forty Plus Clubs in New York, Chicago, Washington, San Francisco, and Los Angeles.

The Age of Anxiety

Business firms, like individuals, are prey to nervous disorders—even breakdowns, says Stewart Thompson, management consultant and faculty member at the University of Western Ontario.

"Nervous breakdowns," says Thompson, "probably describes rather well what is going on now in some companies. Lacking a central unifying concept of what is the main work of their business, some managers find it difficult if not impossible to understand what are the major changes in society to which their businesses must adapt. In addition they lack confidence in knowing how to go about creating changes because of a lack of central unifying ideas as to what kind of business these managers are trying to develop."

Thompson cites the case of a company that was originally in the cosmetic business, but which has now moved into other fields. Its management is still trying to run the firm as if it were still in the cosmetics line using reports and information that don't give a clear picture of the real health of the firm.

Every decision becomes a crisis, and there's no continuity of policy. The result is that management begins to act in desperation, striking out wildly whenever something goes wrong in the business. This is much like a nervous breakdown, says Thompson.

Prescription for better corporate mental health: Managers should develop their objectives, goals, and policies around the major opportunities open to their firm in new markets and new technologies. And they should tailor their reporting and internal information systems so they can evaluate their performance in reaching these goals.

PURCHASING PARADE

Personal glimpses of P.A.'s as they march by in the news

P.A.'s are well represented on land, sea, and air, as the three cases below indicate:

• **Air-Borne:** Like father, like son; Jack D. Springer, recently appointed P.A. for Stanley Aviation Corp. (Denver, Colo.), and his son, Bob, have a lot in common in the fast-growing field of space travel.

The father is P.A. for a manufacturer of escape capsules for aircraft and during past years was Procurement Officer at the U. S. Naval Ordnance Test Station and Buying Supervisor at Aerojet General Corp., both in California.

The son, 18, also works at Stanley in the test laboratory and holds the world's amateur rocket altitude championship. Two years ago, he constructed a rocket which attained a height of 31,999 feet. Young Springer has been carrying out his rocket work in cooperation with the Reaction Rocket Society of L.A. and has to his credit a congratulatory letter from Dr. Wernher von Braun. Bob plans to enter California Polytechnic Institute this fall to major in astronautical engineering.

• **Seaworthy Samuel Green,** new Assistant P.A. in the central engineering office of Crown-Zellerbach Corp. (Seattle, Wash.), is starting to build his own private fleet after 21 years on the high seas with the Navy.

Green retired after rising to the rank of lieutenant-commander, having served on the largest ships. He now confines his sailing to a 10-foot glass



boat, but expects to work up to bigger vessels before long.

• **And down to earth,** we have Robert Hennessy, Vice President in Charge of Purchasing at National Distillers Products Co. (New York), as the most recent grandfather among the company's top management.

Hennessy is shown, above left, being inducted into the Old Grand-Dad Club by B. D. Ohlandt, Executive Vice President of the company, and Old Grand-Dad Number One. Ceremonies were conducted at the Old Grand-Dad Corner of Sardi's East, New York City restaurant.

Other prominent members of the club are the celebrated Grand-Dads Nelson Rockefeller, Jack Benny, Harry Truman, Omar Bradley, Henry Ca-

bot Lodge, Winston Churchill, Pres. Eisenhower and James Haggerty.

When Richard Taylor was promoted to Office Services Manager, including the function of purchasing manager at Oregon Physicians' Service, he just kept on sawing wood.

Making furniture in his well-equipped woodworking shop at home is one of Taylor's diverse hobbies. He's also an enthusiastic amateur photographer.

• **Personal Touch:** The Carolinas-Virginia Purchasing Agents Assn.'s membership roster is proof of Southern hospitality. Behind each man's name is listed his wife's name in parentheses.

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PURCHASING WEEK Asks . . .

What factors do you consider in determining the average cost of a purchase order?



R. J. Niehaus, Manager of Procurement & Programming, Schwitzer Corp. (turbo-chargers, vibration dampers, fans, etc.), Indianapolis:

"Non production orders are segregated from production orders as non-production requirements are not handled through our material control system. We add the amounts expended for fixed expense, variable expense, controllable payroll, service department allocations, and tab department expense for both that portion of the purchasing department devoted to procurement of the material control department. This total number of production orders issued (including tool orders)."

production material and dollar figure is divided by



O. J. Cole, Director of Purchasing TSC Division, Ryder Trucklines, Houston:

"There are five factors that we take into consideration: (1) material cost; (2) preparation cost; (3) distribution cost; (4) filing cost; and (5) recording cost. It costs us \$1.27 to pay for processing each purchase order."



L. C. Myers, Manager of Materiel, Ground Systems Group, Hughes Aircraft Co., Fullerton, Calif.:

"We compile cost data on small groups handling similar items, e.g., components, assemblies, etc. As labor is the dominate variable cost, averages are generally expressed as personnel cost per purchase order and personnel cost per \$100 of purchase orders placed. We use charts showing monthly averages over a three year period to portray trends. Included are wages of buyers, supervisors, expeditors, etc."



J. H. Wagner, Director of Purchases, Collins Radio Co. (Radio Apparatus), Cedar Rapids, Iowa:

"We divide the number of requisitions received per month by purchasing into the operating cost of the department. Operating costs include all salaries and indirect labor, telephone, supplies, travel expense, etc., for the department."



R. C. Herdrich, Vice President in Charge of Purchasing, Rolled Steel Corp. (steel warehouse sheets, etc.), Skokie, Ill.:

"If you had four people in a purchasing department and their salaries totaled \$30,000 per year and they wrote 1,000 orders a year, the obvious cost would be \$30 per order. But, doesn't the meaning of a purchase order's cost resolve itself not in cost but in savings—the ability of a purchasing team to evaluate the worth of any given supplier. A division of cost divided by number does not spell the answer. Issuing an order is relatively inexpensive but, I'm sure, a necessary change or follow-up is equally as expensive as the original order."

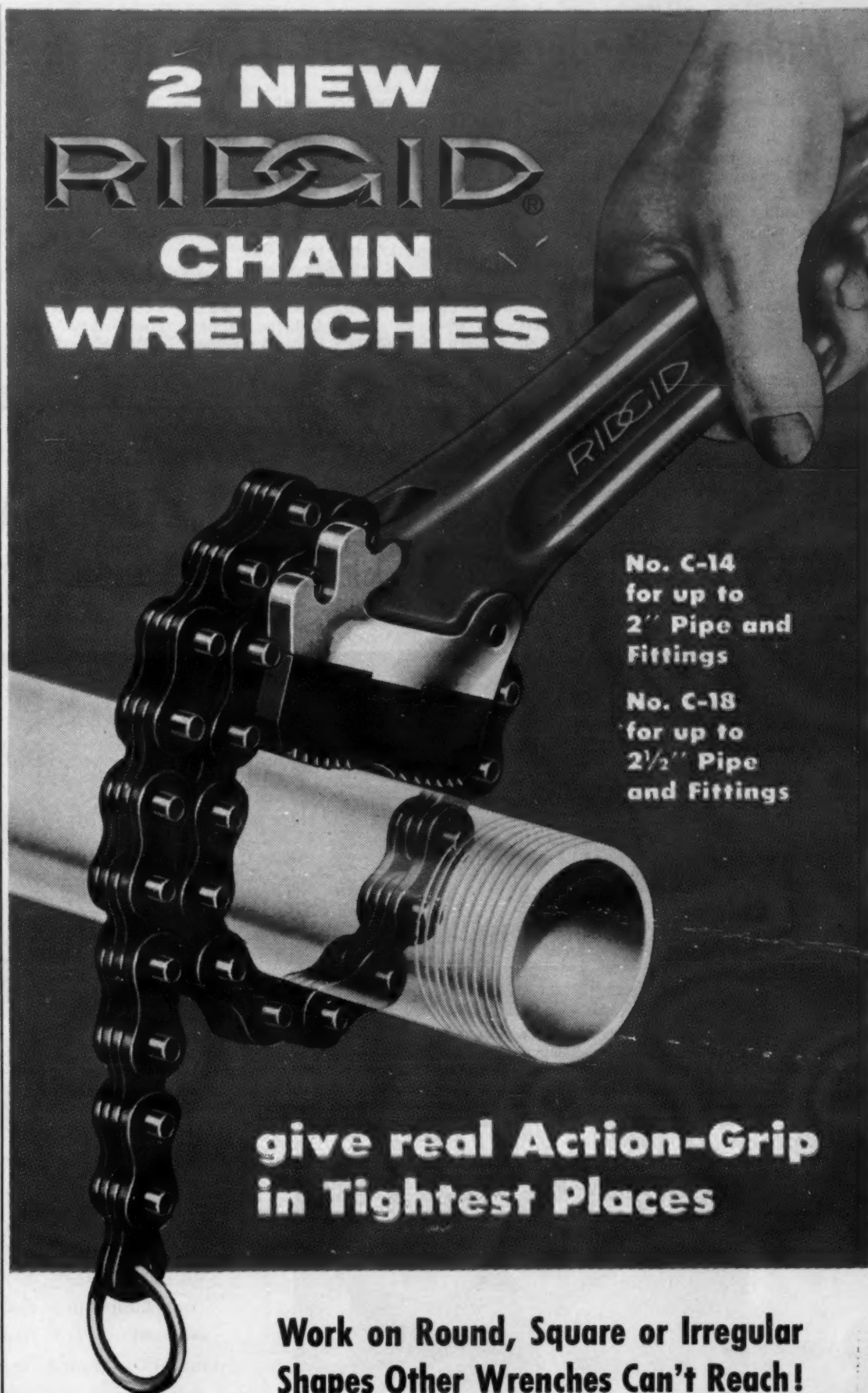
number does not spell the answer. Issuing an order is relatively inexpensive but, I'm sure, a necessary change or follow-up is equally as expensive as the original order."



T. E. Soldat, Manager of Purchases, General Chemical Division, Allied Chemical Corp., New York:

"Generally, the factors I would include would be the time-cost of (1) placing orders, (2) receiving and inspecting material, and (3) the accounting function of approving and paying invoices. I would be inclined to limit purchase order cost studies to the procurement of repetitive items, e.g., MRO supplies."

2 NEW RIDGID CHAIN WRENCHES



**No. C-14
for up to
2" Pipe and
Fittings**

**No. C-18
for up to
2½" Pipe
and Fittings**

**give real Action-Grip
in Tightest Places**

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locks securely . . . releases quickly. Rugged, comfort-grip, I-beam handle, guaranteed not to break or warp . . . handy hang-up hole.

Light and easy to use, these new **RIDGID** Chain Wrenches do everything a regular wrench can do . . . and much more. Call your Supply House and get one today!

RIDGID

Molasses Producers Sign FTC Consent Order

Washington — Southwestern Sugar and Molasses Co., some of its subsidiaries and affiliates, and other producers of blackstrap molasses consented to a Federal Trade Commission order forbidding them to continue alleged price fixing and other conspiracies to eliminate competition.

The FTC in April charged the companies with conspiring to set identical prices and coercing competitors and customers to abide by them. The FTC also claimed the blackstrap produc-

ers boycotted competitors who did not adhere to the fixed prices, divided territories and accounts among themselves and designated one of themselves as sole bidder on available supplies.

Blackstrap molasses is used to make industrial alcohol and rum and as an additive to cattle feed.

In addition to Southwestern, the FTC in the complaint named: Standard Molasses Co., Inc., and Imperial Molasses Co., Ltd., Southwestern Subsidiaries; Industrial Molasses Corp., and National Molasses Co., identified by

the FTC as "business affiliates" of Southwestern; Czarnikow Rionda Co.; J. H. Leftwich & Co., Inc.; Molasses Trading Co.

A complaint against New Mexico Timber Co. and a Southwestern Mexican subsidiary, Campania de Miele de Mexico, was dropped. Both concerns have become inoperative in the molasses business.

In signing a consent order, the companies agreed they would not engage in the alleged practices, but admitted no violation of the law.

Fall-Off in New Borrowing Indicates Buyers Are Becoming More Cautious

Washington—New borrowing, particularly in key "big-ticket" consumer lines, dropped off sharply in July from previous month levels, indicating growing caution on the part of buyers.

Latest (July) credit figures tell the story:

• **Extensions** (new borrowings), while level on an over-all basis, are down in the key auto and appliance lines.

• **Repayments**, reflecting heavy borrowing over the past few

years, are at peak rates—thereby siphoning off otherwise available purchasing power.

• **Credit outstanding** (extensions less repayments) is still rising—but at a very much slower pace than the first half of 1960.

New Credit

A breakdown of new borrowings give a clearer picture of what is happening to consumer credit.

Automobile paper extensions show a sharp drop of some \$83-million (seasonally adjusted) from the previous month. It puts this key category at the lowest level since last December—when strike shortages reduced the availability of new cars.

Still another important installment area—"other consumer goods paper"—also shows considerable decline. This group, which covers most credit buying of appliances, is down some \$28-million from June levels.

The fact that the over-all extension figures managed to hold their own is due to the continued rise of personal loans. This, in itself, could be a hint that people are running into financial difficulties—and need loans to tide them over.

Repayments

A look at the repayment picture also reveals some surprises. A sharp \$118-million jump over June levels—to a record high—reflects the growing family debt burden.

How heavy this burden is getting is emphasized by the fact that current payback rate is a hefty 9.4% above the year ago figures.

All sources are contributing to the repayment rise. Auto paper, other consumer goods paper, repair and modernization loans, and personal loans were all above month ago and year ago levels.

Credit Outstanding

These repayments gains, however, were still not large enough to balance out new extensions. Result: credit outstanding (extensions less repayments) show a small rise.

But how long such rises will continue is problematical. The gap between extensions and repayments (currently \$249-million) is the smallest it has been in over two years.

If it continues to diminish to the point where repayments top extensions—then it's time to become worried. That's because such a situation is usually a prelude to a business dip.

In early 1958, for example, repayments rose above extensions. It's no coincidence that industrial production reached its low point three months later in April of that year.

Mixed Emotions

Some conservative economists, however, view the new credit slowdown trend with mixed emotions. On the one hand, they are certainly disturbed by the implications of slower consumer buying.

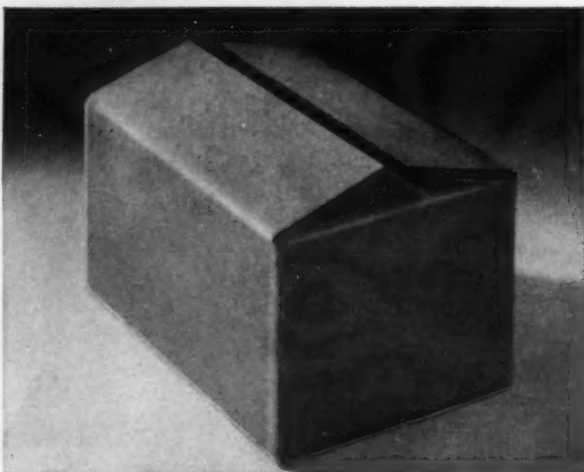
But on the other hand, they have been voicing doubts about the too rapid growth in consumer credit—and as such are not too unhappy to see some easing off.

3 COMMON PROBLEMS IN CASE SEALING

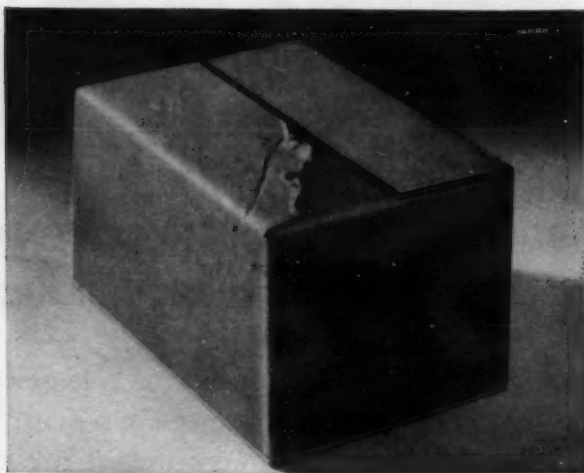
(and how the Arabol man helps you solve them)



THE ADHESIVE DRIES TOO SLOWLY—When this happens, unsealed boxes pile up and shipping schedules can't be met. Check your compression unit. Cases may be moving through it too fast. Or perhaps they're under insufficient compression. Then, there's the paperboard itself—it may be damp. In any event, see your Arabol man. He'll come up with an adhesive that suits the condition.



THE SEAL WON'T HOLD—We can list three possible reasons: (1) Your boxboard is soaking up the adhesive too fast. Solution: adjusting adhesive viscosity to suit your specific machine requirements. (2) Case content is too heavy. Solution: a stronger or faster drying adhesive. (3) Your sealed box is exposed to moisture. Solution: a water-resistant adhesive. Why guess? Ask the Arabol man.



THE SEAL IS TOO STRONG—Sometimes an adhesive can seal a case so tightly, you'd think only dynamite could blast it open. If the problem develops suddenly, check your paperboard. A change in the finish may be the cause. One solution is an adhesive that provides less penetration. Another is to apply the adhesive via the skip or strip method. What you want is just the right amount of holding power—and the Arabol man will see that you get it.

THE BEST WAY to solve case sealing problems is to prevent them from happening. You can begin by contacting your Arabol man. His adhesive know-how can be a big help. So can his close contacts with machine and shipping case manufacturers. To give you a better understanding of how to select and use adhesives, send for our free booklet, "HOW TO BUY ADHESIVES—23 BASIC YARDSTICKS"



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Meetings You May Want to Attend

First Listing

National Stationery & Office Equipment Show—Conrad Hilton Hotel, Chicago, Sept. 24-28.

National Aeronautic Meeting, Manufacturing Forum and Engineering Display—Ambassador Hotel, Los Angeles, Oct. 10-14.

American Institute of Electrical Engineers Exhibition—Bellevue-Stratford Hotel, Philadelphia, Oct. 26-28.

14th Annual Automatic Vending Convention & Exhibit—Exhibition Hall and Fontainebleau Hotel, Miami Beach, Oct. 28-Nov. 2.

First National Die Casting Exposition & Congress—Detroit Artillery Armory, Detroit, Mich., Nov. 8-11.

Previously Listed

SEPTEMBER

Tennessee Valley Agricultural & Industrial Fair—Chilhowee Park, Knoxville, Tenn., Sept. 12-17.

Chemical Exposition, USA, 1960—Statler-Hilton Hotel, New York, Sept. 13-15.

Second Annual Maintenance & Engineering Show—State Fair Arena, Raleigh, N. C., Sept. 14-17.

Institute of Surplus Dealers—14th Trade, Show Building, New York, Sept. 18-20.

Steel Founders Society of America—Fall meeting, The Homestead, Hot Springs, Va., Sept. 18-20.

Office Equipment & Machines Conference & Exhibit—Life Office Management Association, Royal York Hotel, Toronto, Sept. 26-28.

Instrument-Automation Conference & Exhibit—Instrument Society of America, Coliseum, New York, Sept. 26-30.

Material Handling Show—Show Mart, Montreal, Que., Can., Sept. 26-30.

Iron & Steel Exposition—Auditorium, Cleveland, Sept. 27-30.

District 2 Conference, NAPA—Hilton-Del Norte & Cortez Hotels, El Paso, Tex., Sept. 28-30.

OCTOBER

American Textile Machinery Exposition—Textile Hall, Greenville, S. C., Oct. 3-7.

Fourth Annual Procurement Conference—sponsored by the Dayton Association of Purchasing Agents, Patterson Memorial Center, Dayton, Ohio, Oct. 7-8.

District 7 Conference NAPA—Peabody Hotel, Memphis, Tenn., Oct. 9-11.

National Hardware Show—Coliseum, New York, Oct. 10-14.

Purchasing Agents Association of Central Iowa—Products Show, Veterans Memorial Auditorium, Des Moines, Iowa, October 12-13.

1960 Products Show—Veterans Memorial Auditorium, Des Moines, Iowa, Oct. 12-13.

District 5 Conference NAPA—Mayflower Hotel, Washington, D. C., Oct. 14-15.

National Association of Oil Equipment Jobbers—Annual Meeting & Trade Show, Sheraton Jefferson Hotel, St. Louis, Mo., Oct. 16-18.

National Metal Exposition and Con-

gress—Trade and Convention Center, Philadelphia, Oct. 17-21.

8th District Conference NAPA—Sheraton-Ten Eyck Hotel, Albany, N. Y., Oct. 18-21.

National Institute of Governmental Purchasing—15th Annual Conference and Products Exhibit, Hotel Shoreham, Washington, D. C., Oct. 23-26.

National Electrical Contractors Association—1960 Annual Conven-

tion, Las Vegas Convention Center, Las Vegas, Nev., Oct. 23-27.

National Business Show—Coliseum, New York, Oct. 24-28.

11th National Conference on Standards—American Standards Association, Sheraton-Atlantic Hotel, New York, Oct. 25-27.

NOVEMBER

National Business Equipment Exposition—Memorial Sports Arena, Los Angeles, Nov. 1-4.

12th Annual Serv-A-Show & Industrial Exhibit—Toledo Civic Auditorium, Toledo, Ohio, November 2-4.

Air Conditioning & Refrigeration Institute Exposition—Convention Hall, Atlantic City, Nov. 2-5.

National Technical Conference & Exhibit—American Production & Inventory Control Society, Sheraton-Cadillac Hotel, Detroit, Nov. 2-4.

Materials Handling Institute's Central States Show—Kentucky Fair & Exposition Center, Louisville, Ky., Nov. 8-10.

Office Buyers Conference—NAPA Office Buyers Group, The University Club, Boston, Mass., Nov. 16-17.

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5. It is joined by a visible, inspectable mechanical seal that is dependable in spite of dirt, moisture, or oil. This seal can carry your trademark in colors.
6. It cannot be slipped on and off your package, bundle, or bale... prevents pilferage.
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8. Signode men train your operators, keep Signode tools in good order, suggest ways to reduce your cost and improve your results. Signode has specialized in steel strapping for over 45 years.
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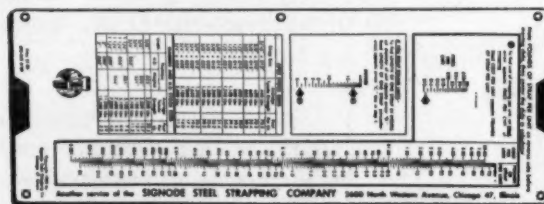
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Short Form Returns Big

Upton, N. Y.—A revised system for handling petty cash purchases at Brookhaven National Laboratory has speeded up procurement and cut paper work—without bypassing the strict accounting safeguards set up by the Atomic Energy Commission.

The system, installed in 1958 by G. W. Maxey, when he became purchasing agent for Brookhaven, is based on a short one-page form (see picture) for requisitions totaling less than \$100. In the less than two years in which it has been in operation, the system has eliminated some 66,000 documents, saved about \$25,000 annually, and increased efficiency by about 40% with no added labor.

Good for 'Off-Beat' Items

The petty cash program has worked exceptionally well in the handling of automotive repairs and maintenance, where the emphasis is on flexibility and avoidance of inventory obsolescence. It has also been used to great advantage in buying the "off-beat" and "one-shot" items, which are among the mysteries of the atomic energy business. Maxey ticked off a typical list: 2 dozen frogs; one dozen white rabbits; 144 yards of gold cord, 100 lb of suet; baby lotion, five gallons of ether; three window shades; 10 boxes of asphalt tile.

When Maxey took over as P.A. at Brookhaven, he found buyers using a bulky 12-page purchase order form for all requisitions, both large and small. Buying "nits and nats," as he describes low-dollar-value nonstore items, was taking a large and growing proportion of buyers' time. It was no secret that 25% to 30% of the purchase orders represented less than 1% of the total dollar volume.

But long forms mean time-consuming processing and delays. "The urgency of all requirements is the No. 1 purchasing problem at the National Laboratory," Maxey says. "It is expensive to keep scientists waiting."

Differs From Industry

"Here, at a research center, is where we differ from industrial purchasing," he declares. "There is little forward planning in research projects. A \$1 U-bolt can hold up an experiment on a multi-million dollar piece of equipment; lack of a dozen frogs may delay important work at the medical center, and so on."

In attempting to reduce the 12-page form, Maxey faced this problem: He had to figure out a system that would provide small quantity low-priced items quickly—and still maintain the policy of buying at the lowest price. His solution was the short order form, which serves as a combination requisition, order, receiving report, certificate of receipt by user—in short, that does everything the old 12-page form could do.

Maxey explained how the system works, by tracing the movement of a short form:

- The requisitioning department sends a short form order.
- The form is assigned to a

for Buying Small Items Savings for AEC Lab

buyer, who selects a vendor, fills in the petty cash data, records the transaction, and sends the form to stores.

• Stores gives the driver the requisition and money for the pickup.

• Driver makes pickup, checks in at stores with item.

• Stores delivers item and form to requisitioning department, where signature is obtained.

• Stores returns requisition to purchasing's audit file.

So far this year, says Maxey, the short form has accounted for more than 6,000 requisitions totaling some \$154,000. Under the old system, Maxey notes, at least 25% of these requisitions would have become purchase orders—with all the extra paper work that the old forms entailed.

In addition to cutting down on purchase orders, the system has

speeded up delivery of items to scientists. Maxey boasts that the new technique, which is used only with local vendors (including New York City, 70 miles away) can deliver goods within 4 to 72 hours.

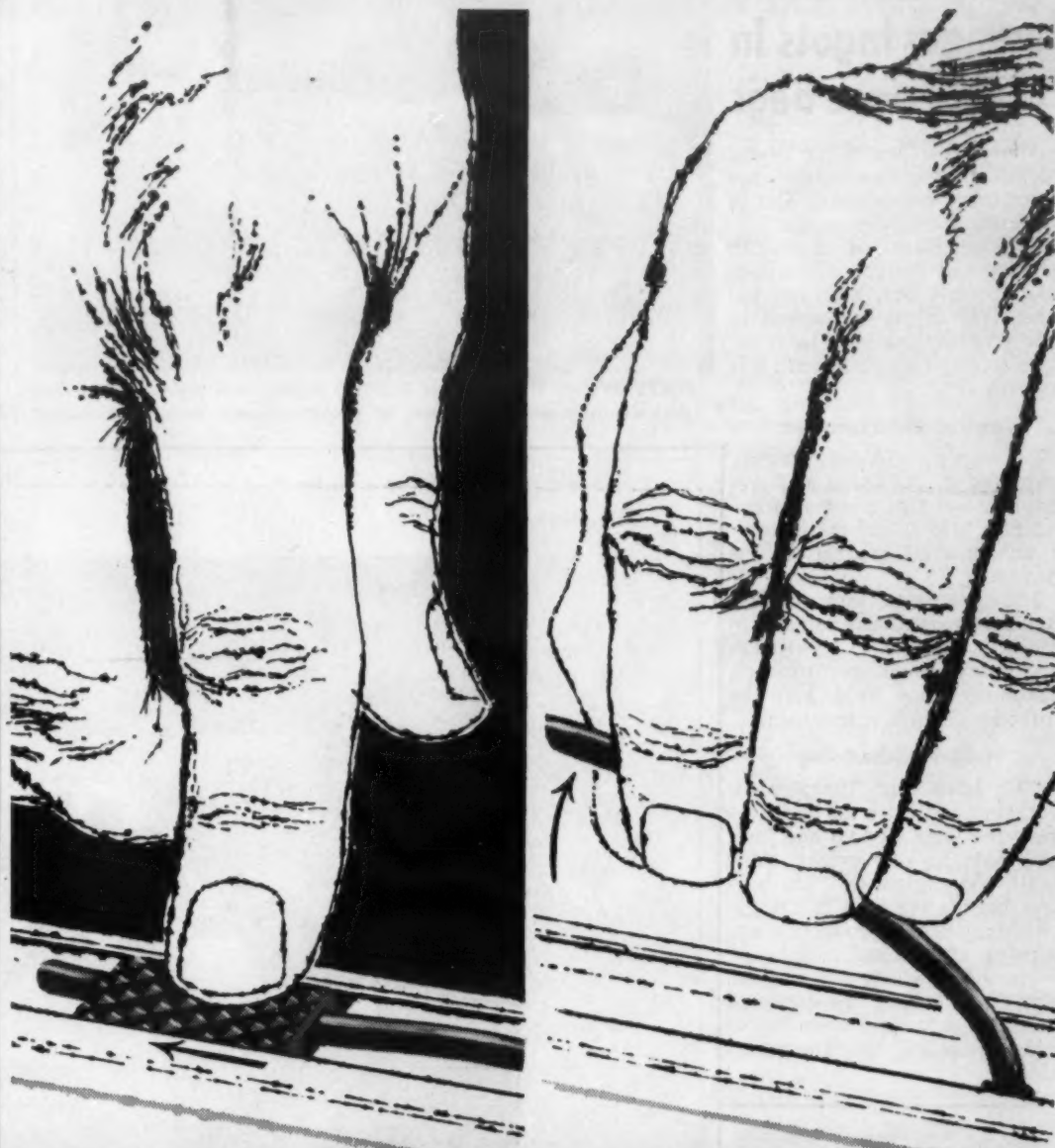
Suppliers Like System

Suppliers like the system, too, he adds, because "it is a cash transaction—no bookkeeping, no billing, or check screening are necessary."

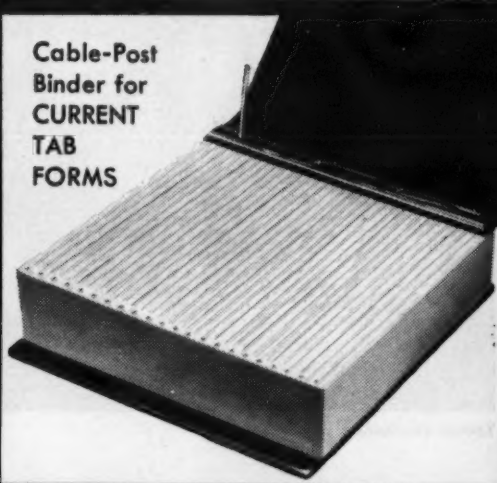
Maxey estimates that the system has saved at least \$25,000 annually since it was put into effect—if you take into account the increase in the volume of orders. This increase would have required hiring two additional buyers and two clerks, under the old system, he points out. The savings estimate also includes the additional forms, office equipment, overhead, etc., which would have resulted from the staff expansion.

PURCHASE REQUISITION		No. 57580	
REQUESTED BY: A. Abrion	DATE: 8/3	TO: State Co.	FROM: State Co.
FOR SECTION: State Co.		TO: State Co.	FROM: State Co.
ACCOUNT NO. 57580		TO: State Co.	FROM: State Co.
SHIP TO BUILDING: 372		TO: State Co.	FROM: State Co.
REQUISITION		REQUISITION	
5 lbs. 5.00	5 lbs. 5.00	5 lbs. 5.00	5 lbs. 5.00
5 lbs. 5.00	5 lbs. 5.00	5 lbs. 5.00	5 lbs. 5.00
PETTY CASH PURCHASE		PETTY CASH PURCHASE	
Vendor: State Co.		Vendor: State Co.	
Address: State Co.		Address: State Co.	
Phone: State Co.		Phone: State Co.	
Total Amt. This Vendor: \$ 10.00		Total Amt. This Vendor: \$ 10.00	
BUYER		BUYER	

SHORT FORM used by AEC's Brookhaven Lab for handling petty cash purchases eliminates 12-page purchase order for low value items, provides for quick competitive bidding without losing accounting controls.



Cable-Post Binder for CURRENT TAB FORMS



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Dealers and Branches in All Principal Cities

American Smelting Packages Ingots In Polyethylene Bags

Alton, Ill.—One of the largest secondary aluminum smelters has begun using polyethylene film to protect ingots during storage.

At the plant of American Smelting and Refining Co.'s Federated Metals Div. here, one-ton bundles of ingots are stored in large polyethylene bags from the time the metal is cooled until it is shipped.

Control Condensation

The bags control moisture condensation on the metal and prevent dirt and dust contamination, and thus help insure the delivery of unblemished products to the consumer.

The spokesman said the bags have been particularly valuable in storing Tenzaloy, ASARCO's proprietary, high-performance, aluminum alloy that may be worked without heat treatment.

Help in Scheduling

"We have kept Tenzaloy for several months with the bags covering the ingot bundle and have been able to ship bright, shiny metal," he explained. "The bags have been a big help in efficient scheduling of our production and shipping operations."

The bags, which are removed from the metal prior to shipment, are used six to eight times before being discarded, the spokesman added.



POLYETHYLENE FILM protects ASARCO ingots from moisture and dirt, thus assuring uniform delivery of uncontaminated metal to customer.

M & T Acquires Orefraction

New York—Metal & Thermit Corp. has expanded its interests in the minerals and metal processing field by acquiring the resources and facilities of Orefraction Minerals, Inc., Andrews, S. C.

Orefraction Minerals supplies granular and dry milled zircon for foundry, refractory, ceramic, and glass industries. M&T has diversified interests in chemicals, metals, alloys, minerals, and welding industries.

M&T will supply zircon sand and zircon flour of high purity

and uniformity in a wide range of particle sizes. It will sell the foundry industry through national distributors.

Broad Expansion

M&T president H. E. Martin said the acquisition "represents an expansion of M&T's facilities for the manufacture and sale of a broad line of related products. These include opacifiers used in vitreous porcelain enamels, pottery and tile products, and special tin chemicals used in ceramic colors and electronic devices."



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Purchasing Agent

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The Purchasing Agent tells plant management about Texaco's "Stop Loss" program

...HOW IT CAN HELP THEM CUT PLANT-WIDE MAINTENANCE COSTS UP TO AS MUCH AS 15%

...HOW IT ALSO HELPS CUT LUBRICANT BUYING COSTS UP TO AS MUCH AS 80%

Reduce the number of lubricants needed — perhaps by as much as 50%. Consolidate buying. Cut paperwork. Secure better inventory control.

How? Through Texaco's "Stop Loss" Program. It's specifically designed to modernize your plant's lubrication practices. Bring those practices in line with

today's efficient production and marketing procedures.

Hundreds of purchasing men have used this Program to reduce lubricant buying costs drastically while achieving simpler, more efficient lubrication systems for their firms.

The Program is complete, and particularly adaptable

Evans Products and Vancouver Firm Open New Plywood Mill in Montana

Butte, Mont.—A new plywood mill, designed to produce 10-million sq. ft. of board monthly from a new wood source, has begun operations in Missoula it was reported here.

The mill is operated by Van-Evan Plywood Co. and is designed to use western larch as raw material.

The plant is a joint venture of Vancouver Plywood Co., Vancouver, Wash., and Evans Products Co., Plymouth, Mich. Initial

capacity is 6-million sq. ft. of $\frac{3}{8}$ " plywood monthly. This will be expanded to 10-million sq. ft. shortly.

Although the use of larch presented technical problems, including a gluing technique, the wood is reported well suited to plywood production because it has few pitch pockets and produces a clear veneer. Samples of the plywood have been accepted by the Douglas Fir Plywood Association.

Carpet Manufacturer Profits From Leasing Plan

Philadelphia — Business has been booming for a large Philadelphia carpet manufacturer since it hitched its sales program to a leasing operation for its products.

Downs Carpet Co., Inc. recently plunged all the way into the rental of rugs and carpets through a unique national leasing system. Keystone of the plan, which operates both through Downs' distributors and its own sales force, is a "no recourse" policy between Downs, its leasing firms, American Industrial

Leasing Co., and the local distributor.

This policy assures the local dealer that he will be paid immediately for his rental sale. He takes no credit risk. He sells, installs, and gets paid.

Generally, the term of the lease is five years. There is a minimum of \$1,500 installed price, including carpet, padding, and any sales tax. All-risk insurance is available at \$3.60 per \$1,000. A company spokesman reports that any company or individual in business with a good

credit rating or one with evidence of financial strength can use the leasing plan.

"If purchasing agents are buying carpeting now," said a spokesman, "they may be wasting money." Budgets which previously couldn't take care of this type of floor covering can now afford it, through leasing.

"Renting brings fine carpeting into the price range acceptable to almost all small firms, such as bowling alleys, restaurants, and small divisional units such as laboratory and plant offices," he added.

With leasing, the firm reports, lower echelon executive can now enjoy carpeted offices, a well-known morale builder and fringe benefit.

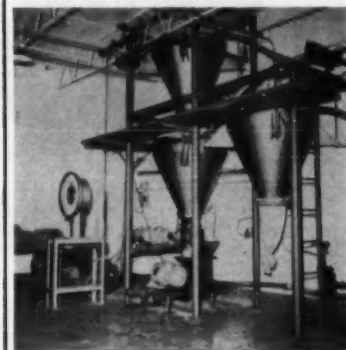
Several department stores, themselves retailers of rugs and carpeting have preferred to lease their own floor coverings through the Downs plans, the spokesman said.

The company goes farther than merely renting stock and woven-to-order carpets. On-the-spot aid in estimating and installation also is provided by design, technical, and cost specialists. Downs does not clean or maintain the carpets, but will help buyers in finding proper maintenance facilities.

Flo-Tronics Sets Up Lab To Run Full-Scale Tests Of Air Conveying Systems

Minneapolis—A new research laboratory, designed for full-scale testing of air conveying systems has been completed by Flo-Tronics, Inc., here.

The laboratory will permit engineers to evaluate handling problems with any type of mate-



NEW FLO-TRONICS is designed to test air conveying systems under actual operating conditions.

rial used in the chemical, food, milling and processing industries. The setup can duplicate installations up to 450-ft. long.

Fluidizing units, rotary airlocks, bag dump, line diverters, scaling equipment, and transistorized electronic process control panels are part of the installation. Flow characteristics, material-to-air ratios, horsepower requirement, and equipment performances can be tested under operation conditions on the laboratory equipment.

Lightweight Trailers

Refrigerated and frozen foods are being hauled in trailer bodies made of balsa wood (the kind used in model airplane kits) and two layers of plastic. The trailers weigh 1,500 lb. less than most comparable models.



Production Superintendent

Maintenance Foreman

Plant Manager

to Purchasing's point-of-view. Included are informative movies, coordinated booklets—even a record system that takes the guesswork out of lubrication scheduling.

Investigate the possibilities of initiating a "Stop Loss" Program for your firm. For a dramatic demonstration of how this program can cut costs, see Texaco's new full-color-and-sound movie, "Stop Loss Through Organized Lubrication." To arrange for an early showing at your plant, fill in and mail the attached coupon today.

TUNE IN: Texaco Huntley-Brinkley Report, Mon. through Fri.-NBC-TV



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Maine Central Railroad Speeds Freight Service

Portland, Me.—Schedules for new mail-merchandise trains went into effect last week on the Maine Central Railroad. They were expected to provide faster movement and better connections for high-priority freight, mail, milk, and express.

The new service was inaugurated Sept. 6, the same day that regularly scheduled passenger train service was discontinued. A spokesman for the railroad called the move "an experiment with a new railroading concept," and said its continuance depends on

patronage by shippers and on the Maine Central's retention of the U. S. Post Office Department mail-carrying contract.

Two Round Trip Trains

The spokesman explained that there would be two round-trip trains between Portland and Bangor, and one between Bangor and Vanceboro. The first to operate—the Northeast's pioneer mail-merchandise train—would leave Bangor freight yard at 3:55 p.m. for Newport Junction, Waterville, Augusta, and Portland.

This train was designed to offer shippers overnight freight service from Bangor to Boston; to Mechanicville, N. Y.; and to St. Johnsbury, Vt.—the three major rail centers that serve as freight gateways to and from most of New England.

A later mail-merchandise train would leave Bangor at 9:35 p.m. Eastbound trains would leave Portland at 12:15 a.m. and 9:15 p.m., the latter connecting with the Bangor and Aroostook for Presque Isle and other Aroostook County points.

Milwaukee Line Turns to Electronics To Improve Its Service to Shippers

Milwaukee—The Milwaukee Road is moving heavily into electronic data processing in order to improve its service to shippers and receivers of freight.

The railroad has set up a Chicago regional data office with an electronic freight accounting system designed to expedite freight billing and related services.

An official of the line explained that the move is an important step in a larger plan involving the installation of electronic data proc-

essing systems to handle fact-gathering and analysis functions for the 10,600-mile railroad.

He said a network of regional data offices will simplify and improve rating and billing procedures, in addition to providing important data for the electronic data processing system when it is completed.

Regional Office Takes Over

Beginning this month, Milwaukee Road freight bills for points in the Chicago area will be prepared in the railroad's new regional data office in that city.

The new rating and billing system going into operation in the Chicago office will apply to shippers now serviced by the railroad's station agencies in Chicago and 31 other Illinois points, as well as 11 located in Indiana and two in Wisconsin.

The Chicago regional office is one of several gathering points throughout the railroad system from which accounting data will be transmitted by wire to the computer center in Chicago. Heart of the entire data processing system will be a large-scale electronic brain of the latest design which will be fed by magnetic tapes at a top rate of 62,500 characters per second. It will be aided by two smaller units handling input and output.

Specialists for Each Office

Rate specialists and accounting experts will be employed in each of the regional data offices to perform such functions as initial rate checking before bills are issued. The rate specialists will also assist in supplying general rate information.

Milwaukee Road officials say the entire system will take about a year to install. When completed, they add, it will give the railroad one of the most modern data handling systems in the world.

Western Kentucky Coal Invades Tennessee Via Lower L & N Rail Rates

Nashville, Tenn.—Western Kentucky has emerged as a major competitor of Tennessee coal producers in the wake of reduced Louisville & Nashville Railroad freight rates on rail shipments from west Kentucky coal fields to the Widows Creek steam plant.

The reduction, announced in a Tennessee Valley Authority letter to coal producers, slashed shipping costs from \$2.69½ a ton to \$1.55 on a graduated scale.

Brought Protests

The rate cut brought immediate protests from southern Tennessee miners and coal producers who claim the reduction "is a scheme aimed at lowering the prices of coal and will, in effect, close down Tennessee mines and displace Tennessee workers."

TVA officials said the agreement with the railroad made possible a second 500,000 kilowatt generator which will be installed at Widows Creek near Bridgeport, Ala. They claimed it opened an estimated 3-million ton a year coal market for both southern and eastern Tennessee and western Kentucky coal producers.

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WHAT ABOUT HIS TIME?

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The truth is that cost of lamps is only 1/10th of your Total Cost of Lighting (TCL) which includes cost of lamps plus power plus maintenance. (If you're remodeling, add cost of fixtures, too.)

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Bullard Presses for Royalty Fees On Automated Machine Tool Systems

Bridgeport, Conn.—Bullard Co., an old line machine tool maker, has been quietly pressing claims that most of the new punched-tape control systems used in automated machine tools are covered by patents it still holds.

The firm is asking royalty fees from some 20 big electronic control makers, says *Control Engineering*, a McGraw-Hill publication, in its September issue. Payments would be "in the order of 3% of net sales price" of all controls sold so far and in, at least, the next eight years, after which one of its primary patents expires.

A 3% royalty could mean retroactive payments to Bullard of about \$400,000 for 1960 alone, estimates *Control Engineering*, and a total of between \$5-million and \$10-million through 1968.

Companies involved in the alleged patent infringement, according to Bullard, include Bendix, Stromberg-Carlson, General Electric, Westinghouse, the Canadian subsidiary of Sperry Rand Corp., Micropath Div. of Topp Industries, Compudyne Corp., and Giddings & Lewis.

Bullard bases its case on a series of 13 patents covering its Man-Au-Trol positioning system for automating a vertical turret lathe, which was first patented in 1944. The current version uses a 50-station indexing drum for programming a machine cycle. Each station—a line of holes across the side of the drum—represents one step in the cycle and is fitted with a pattern of pegs by the operator before the job begins.

Bullard maintains that the

punched tape method of programming is an exact equivalent of its indexing drum—and that there are many other similarities between its patented system and the latest numerical control devices.

E. P. Bullard, III, president, said that the company has not decided how far it will go in pushing its claims, but he believes that most of the firms involved will agree to negotiate and that litigation will not be necessary.

Steel Founders Plan Contest to Spur Progress

Cleveland—The Steel Founders' Society of America plans to run an expanded Product Development Contest in conjunction with the steel casting industry's centennial observance in 1961.

J. A. Bray, of the Mackintosh-Hemphill Div. of the E. W. Bliss Co., Pittsburgh, and chairman of Product and Market Development said that prizes totaling \$10,000 will be awarded in the contest, which runs from October, 1960 to June, 1961.

Almost any new development

or improvement in the use of steel castings will be eligible. Twenty-two awards in each of five fields—totaling 110 cash awards and corresponding certificates—will be made in the contest.

There will be two classes of entrants: industry and student. Industry personnel—except steel foundry employees and SFSA staff members—are eligible to compete in the industry class and full-time students are eligible to compete for the prizes in the student class.

Entries for both classes must be made in one of five divisions: (1) end cost, (2) mechanical design, (3) metallurgical design, (4) redesign or conversion, and (5) unusual or unique.

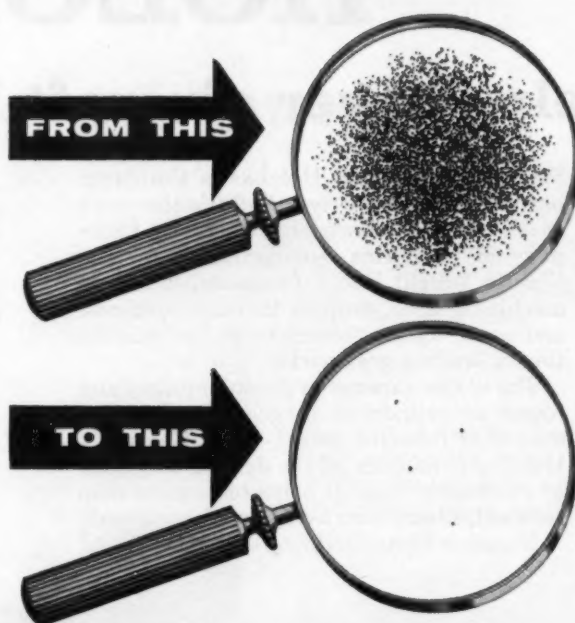
Rules Available

Complete rules and useful guides for the 1960-61 Centennial Product and Development Contest are now available. Copies can be obtained from the Steel Founders' Society of America, 606 Terminal Tower, Cleveland 13, Ohio.

*This is a
Dust
Particle*

*This is a
Cyclo-trell
Dust
Collector →*

**The Cyclo-trell
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Cleans Gas with these
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**Result:
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This is a fact. If you have a process or cleaning problem in steel mills, refineries, paper, cement or chemical plants, call on Research-Cottrell. • We will be glad to consult with you on your specific dust collection problems, and place at your disposal the largest research and engineering facilities.

For further information, write for Bulletin 300 which describes several applications in detail.

Four Pipeline Companies Get FPC Approval for \$58-Million Expansion

Washington—The applications of four national gas pipeline companies have been approved by the Federal Power Commission for construction of \$58-million of new storage and transmission facilities.

Texas Eastern Transmission Corp., Shreveport, La. will spend about \$40.6-million to build 214 miles of pipeline, plus a new compression station and two metering plants. It has the authority to provide limited winter service to 23 wholesale customers in the Midwest and East. Texas Eastern also will develop the Leidy Storage Field in Pennsylvania jointly with the Transcontinental Gas Pipe Line Corp., Houston, and New York State Natural Gas Corp. for an estimated cost of \$8-million.

Algonquin Gas Transmission Co., Boston, received permission to construct \$5.5-million of pipeline facilities in Massachusetts.

Trading Coffee Break

Chicago—Officials of a 6,800-member plumbers' union here have swapped a coffee break for wage hikes. Time saved from the coffee break is estimated to add up to about \$3.4-million annually for employers.

Research-Cottrell, Inc.

Main Office and Plant: Bound Brook, New Jersey

Representatives in major cities of U. S. and Canada



Florida Steel Outlines \$3.3-Million Furnace and Rolling Mill for Carolinas

Charlotte, N. C.—The Carolinas are getting their first steel furnace and rolling mill.

Florida Steel Corp. announced it has selected the outskirts of Charlotte as the site for a \$3.3-million facility for producing reinforcing bars. Capacity of the plant, which will serve primarily the Carolinas, will be 51,000 tons/year.

Also Fabricating Facilities

Florida Steel also plans to include on the 100-acre site facilities for fabricating the reinforcing bars coming from the mill. Construction will begin this fall, with completion scheduled for mid-1961.

Because scrap metal is one of the principal exports—tonnage-wise—of the Carolinas, the Charlotte mill is expected to obtain all the scrap it will need from within the area. Florida Steel estimates it will buy between 55,000 and 60,000 tons of scrap annually.

Spur for the new project was the acquisition last week by Florida Steel of Easterby & Mumaw, Inc., a Charlotte-head-

quartered steel fabricating firm with plants in Charlotte and Raleigh. Combined sales for the newly-merged companies were \$33.5-million for the fiscal year ended Sept. 30, 1959.

In addition to its Tampa plant which turns out reinforcing bars, small bar angles and plain rounds, Florida Steel has steel fabrication plants—located in Miami, Orlando, Fla.; Decatur, Ga.; Roanoke, Va.; and Statesville, N. C.



PLANT SITE: Acquisition of Easterby & Mumaw, Inc., gives Florida Steel 100-acre site (above) for the Carolinas' first steel furnace and rolling mill.

Carbide in Minneapolis

Chicago — Union Carbide Plastics Co. has opened a sales office in Minneapolis it was announced here.

Regional sales manager P. W. Wood said the office will be located at 4010 West 65th St. and will be supplemented by warehouse facilities at the Midway Terminal Warehouse Co. in St. Paul.

Wood said the new location "will permit us to maintain the closest possible contact with our customers in the area, increase the efficiency of our services to them and further promote the use of our products."

Allied Metal Hose Forms New Division Staffed By Pipe Motion Specialists

New York—Allied Metal Hose Co. has completed formation of a Heating, Air Conditioning, and Piping Div., as another step in its expansion program.

The company said the new division is specially staffed and equipped to service mechanical contractors, engineers, consultants, and others who use or specify flexible connectors to control pipeline motion.

The division will contact customers through sales representatives, trained in pipe motion engineering. Although the division will have many standard sizes of flexible connectors available, its specialty will be the custom-engineered application of flexible pipe-to-pump connectors, vibration tamers, and expansion compensators.

All of these will be furnished in a wide range of diameters, lengths, and materials, including stainless steel, Monel, bronze, and hot-dipped galvanized steel, the company said.

Telecomputing Branches To Huntsville and Dayton

Los Angeles — Telecomputing Corp., manufacturers of aircraft and missile control systems, has opened the first two offices in what will be a network of branches in key governmental procurement areas.

The firm has set up shop in Huntsville, Ala. and Dayton, Ohio. It will open a similar branch shortly in Washington, D. C., to cover the East and later will expand this office to include Europe, according to William R. Whittaker, president.

"Through these regional offices, direct contact and service with governmental agencies, prime contractors and other customers will be available," he said.



Reynolds Aluminum HOLOBAR^{T.M.}

helps lower aircraft landing gear costs

Reynolds Aluminum Holobar is aluminum bar stock *minus the core*. And it's the stock that enables Menasco Manufacturing Company of California, subcontractor for the Chance Vought F8U-1 Crusader, to cut its machining time, simplify its chip problems, and assure closer tolerances in the production of landing gear parts.

The major expense in manufacturing any round or cylindrical part is often the removal of interior metal—and Reynolds Holobar eliminates all the drilling and most of the boring costs. It helps reduce the chip removal, storage and resale problems as well.

Menasco Manufacturing Company found

Reynolds Holobar has the right strength-to-weight ratio for adapters, bearings, gland nuts, retaining nuts and lock rings for landing gear components.

In addition, Reynolds Aluminum Holobar assures wall-to-wall mechanical soundness and uniform physical properties. Solid bar stock often has core-to-surface variation. Reynolds Holobar does not. The heat and pressure generated in machining solid bar stock are greatly eliminated, so closer tolerances can be held.

Reynolds Aluminum tubing saves more than machining and production costs. The weight savings of pre-removed metal makes

Watch Reynolds new TV show "Harrigan & Son", Fridays, starting October 7; also, "All Star Golf", Saturdays, resuming October 15—ABC-TV. And on Sunday, October 16, be sure to see the exclusive showing of America's new 1961 cars on The National Automobile Show, direct from Detroit over CBS-TV, 6 to 7 P.M. EDT.



REYNOLDS

Industry News In Brief

Beckman Moves Sales Hq.

Lincolnwood, Ill. — Midwest sales and service headquarters for the Scientific and Process Instruments Division, Beckman Instruments, Inc., have been transferred to expanded facilities here.

The new building will house sales and service offices, a fully equipped repair shop, and an Applications Laboratory. Beckman said the move to larger headquarters was prompted by the increasing volume of sales of Beckman analytical laboratory

instruments, and continuous stream analyzers in the Midwest.

New Mallory Division

Indianapolis—P. R. Mallory & Co. has set up two new operating divisions to handle electromagnetic and semiconductor products.

Mallory Electromagnetic Co. will manufacture vibrators, relay systems and other electronic devices. The new Mallory Semiconductor Co. will manufacture silicon rectifiers.

Formerly both operations were combined in the Mallory Elkon Division. Both new divisions will continue to operate from the firm's plant at Du Quoin, Ill.

B-W Sells Crane & Hoist

Chicago—All-State Engineering Co. has purchased the Industrial Crane & Hoist operations of Borg-Warner Corp., here. The B-W operation will be transferred to All-State's Milwaukee plant, which has been expanded for the needs of the acquisition.

Yuba Acquires Coyngo

Tulsa—Coyngo Products, producer of heat exchangers, has been acquired by Yuba Consolidated Industries of San Francisco. The company will be operated as a subsidiary to be known as Yuba-Tulsa Corp.

At the same time the company made known plans to expand the Tulsa facility to make it a major producer of heat exchangers and other equipment for the petroleum and chemical industries. New manufacturing bays will be added to increase manufacturing area from 120,000 to 180,000 sq. ft.

Two other Tulsa companies,

previously purchased by Yuba, Arrow Industrial Manufacturing Co. and K. W. Anderson Co., will become part of Yuba-Tulsa, a spokesman said.

GE Sales Office in Phoenix

Phoenix—General Electric has opened a new district sales office here to market industrial plastic laminates in the Western states.

The new office will be located in the Guarantee Bank Building, 3550 N. Central Ave. The office will provide sales and technical service for laminate distributors and manufacturers of electrical and electronic equipment using the product for insulating parts in computers.

Hewitt-Robins to Expand

Stamford, Conn. — Hewitt-Robins, Inc., manufacturer of industrial belting and material handling equipment plans to acquire the Union Chain and Manufacturing Co. of Sandusky, Ohio.

Directors of both companies have approved the merger and final acquisition is subject to approval by Union Chain stockholders. Union Chain's annual sales total \$4-million.

Crown-Zellerbach Expands

Denver — Crown-Zellerbach Corp. plans to build a multi-million-dollar pulp mill to manufacture newsprint at a site near Kremmling in northwest Colorado.

The U. S. Forest Service has been urging construction of a mill in the area to utilize trees killed by insects in the stands of spruce and pine.

Name Change

Buffalo—The Welding Department of the Westinghouse Electric Corp. has had its name changed to West-Ing-Arc department.

The name West-Ing-Arc formerly applied largely to the process of gas shielded welding developed by the company. Westinghouse feels the new name is more representative of the broadening products handled by this department in the fields of metals joining, finishing, separation, and melting.

Fairbanks Builds Addition

Binghamton, N. Y.—Construction has begun on a \$100,000 addition to the iron foundry building at the Fairbanks Co. valve plant here.

The project will modernize facilities and is designed to increase efficiency rather than boost production. The 20,000 sq. ft. of new space in the building will house iron core and cleaning rooms and provide new fire-proof storage space for the firm's patterns.

Owens-Illinois to Build

Rochester, N. Y.—Owens-Illinois Glass Co. plans to build an ultra-modern, multi-furnace glass container plant on a 70-acre site at nearby Brockport.

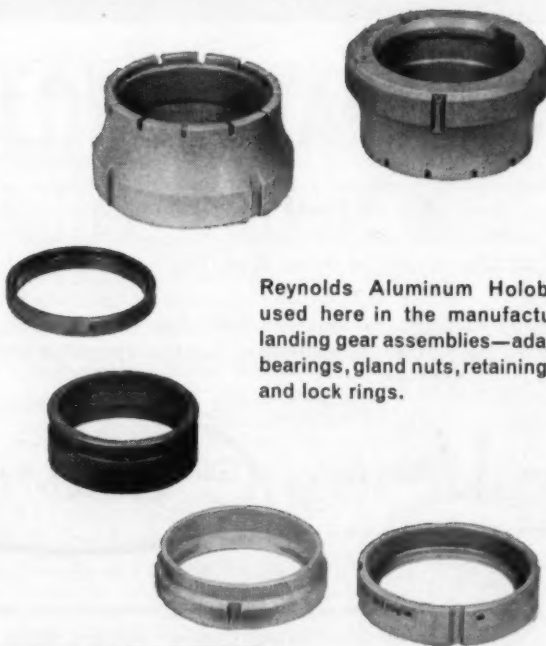
The plant will be the company's 18th for the production of bottles and jars.



... and assures close tolerances

handling and loading operations easier, faster. Easy to machine and thread, Reynolds Holobar is more economical than bar stock in initial per-foot cost.

It is available in alloys 2024, 6061 and 7075. Sizes range from 1" to 8" O.D., and wall thicknesses from .095" to 1.25". Not all alloys are available in all sizes, however. Reynolds Holobar is just one more way in which aluminum—and Reynolds—serves aircraft and other industries. For full details on Reynolds Holobar Seamless Mechanical Tubing, contact your Reynolds Distributor or write direct to Reynolds Metals Company, P.O. Box 2346-QP, Richmond 18, Virginia.



Reynolds Aluminum Holobar is used here in the manufacture of landing gear assemblies—adapters, bearings, gland nuts, retaining rings and lock rings.

ALUMINUM



PALLETS FOR PAILS: Clyde Keefer, P.A. at Pittsburgh Plate Glass Co. Paint Div. in Atlanta directs stacking of paint pallet packages which he helped to develop.



TAKING THE WRAPS OFF: Pallet is undone inside the plant, and pails removed as needed. Empty pallets will go back to supplier with tarp between runners.

P.A.'s 'Pallets for Pails' Idea Saves Five Ways for Pittsburgh Plate Glass

Atlanta—A new palletized system for handling incoming steel paint containers at Pittsburgh Plate Glass Co.'s Paint Div. has cut the number of man-hours required for unloading from 16 hours to one hour per carload.

In addition, the new method, developed by Clyde Keefer, purchasing agent for the Paint Div., has . . .

• Erased \$175 in monthly freight demurrage costs paid out under old pail-handling system.

• Switched indoor storage to outside storage—saving 1,000 sq. ft. of storage space, valued at \$13,000 per year.

• Eliminated in-transit damage to pails—an expense that used to hit his company for \$28 per carload of pails.

• Reduced necessary inventory of pails by 50%, due to shortened lead-time.

Pittsburgh Plate Glass' plant here formulates and manufactures paints both for retail and industrial sales. A large volume of the paint is sold in five-gallon (24 and 26-gage) steel pails. The pails are straight-sided, with lug covers.

Supplier Prompted Idea

Keefer got the idea for his pallet-package when his pail supplier offered to deliver pails on pallets equipped with metal-rack sides. Keefer went for the idea because he had been receiving pails packed singly (no pallet, no package) in rail cars.

The 3,600-pail carloads took 6 man-hours to unload. With one man unloading, this meant the car was occupying unloading dock space for two full working days. So Keefer took the supplier up on his offer of pallets with metal side-frames.

But, as Keefer watched the frames being dismantled and handled at each unloading, he wondered if there wasn't still a better way of doing it. And he found there was.

The P.A. suggested a wooden pallet to carry a 150-pail load. A tarpaulin on top would hold the load in place and, at the same time, allow outside storage. The tarp would flap down over the sides, and ropes tied through rings in the tarp would connect to the pallet, to make a neat, non-shifting, package.

Keefer's pallet, rope, and tarp units cost \$20 each. He reports having had to replace or repair just two tarps, and no pallets, in two years.

A flat-bed truck using this pallet system can carry 1,800 pails by double-stacking. Maximum load under the singly-stacked system was 1,200 per truckload.

Keefer says that even on long hauls (he buys pails from as far as 160 miles away), the palletized pails don't shift, rub, or lose their lids.

Ease of Return

Another important advantage of the pallet system for pails is the ease with which workmen return the pallet-package. When a pallet of pails is needed, it is moved to the labeling area, where pails are unloaded singly for attachment of the paint-description labels, prior to filling.

When the last pail is taken from the pallet, the worker lays the tarp out, throws the ropes in toward the center, folds the tarp, and sticks it between the runners of the pallet. When a delivery truck arrives from the pail supplier, the truck unloader sees to it that a pallet is placed in the truck for every pallet-load that was delivered.

The pallets belong to Pittsburgh Plate Glass, so it is important that this system of pallet-accounting be followed.



"POST" HASTE—The S. S. United States, flagship of the United States Lines proud fleet of 55 ships, is the holder of the blue ribbon for the fastest North Atlantic crossing both east and west . . . a triumph achieved at the time of her maiden voyage in July, 1952.

This unprecedented speed in crossing makes the big ship a vital carrier of U.S. mail. The huge canvas containers pictured can accommodate 100 bags of mail and were created to provide protective covering, to solve deck space problems and to speed up handling in order to cut down port time in ports where the United States might be scheduled to make only brief calls. Due to the efficiency and multi-purpose character of these specially designed containers, the huge vessel is able to transport important mail which might otherwise have had to be carried by slower ships. The canvas containers were made by Vincent J. Spelman & Co. from Mount Vernon duck.

This is another example of how fabrics made by Mount Vernon Mills, Inc. and the industries they serve, are serving America. Mount Vernon engineers and its laboratory facilities are available to help you in the development of any new fabric or in the application of those already available.

UNIFORMITY
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In Industrial
Fabrics

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A LEADER IN INDUSTRIAL TEXTILES

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Main Office and Foreign Division: 40 Worth Street, New York, N.Y.
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MOUNT VERNON MILLS, INC. PRODUCES A WIDE RANGE OF FABRICS IN THESE CATEGORIES: Army duck, ounce duck, wide duck, drills, twills, osnaburgs and sateens • Fabrics used by the canvas goods manufacturing industry • Hose duck, belt duck, chafer fabrics and other special fabrics for the rubber industry • Laminating fabrics and special constructions for the plastics industry • Ironing machine aprons and cover cloths for the laundry industry • Special fabrics for the coating industry • Standard constructions and specialties for the shoe, rug and carpet industries • Dryer felts for paper making, aprons for harvesting machines • Mop yarns and drapery fabrics • Work clothing fabrics for industry • Fabrics for U. S. Army and Navy • Specification fabrics for industry generally.

Lockheed 'Instant Inventory' System Reveals Supply Situation at a Glance

Marietta, Ga.—Lockheed Aircraft's Georgia Div. has begun using a production control system that shows at a glance which items are in short supply and which ones are available in ample quantity for current production needs.

The system, built around Flag Shop Order Status reports (FSOS) and shortage display racks, is an outgrowth of the old method in which details of each job assigned to production control were punched onto IBM cards.

Under the old system, the cards accompanied the jobs through cost centers and then to the using assembly. The trouble was, however, that there was no over-all inventory control in using production areas, except by personal supervision.

Duplicate FSOS cards set up on shortage display racks in each cost center solved the control problem.

Daily FSOS Report

Now, each using assembly station gets a daily FSOS report giving the part number, movement of the part from one cost center to another, and the estimated completion date of the job. Status of the part is listed under one of three categories—supercritical, critical, and cushion, depending on its availability.

Each day, duplicates of these IBM cards go into the shortage racks so that production foremen

can tell at a glance which jobs have top priority and can be worked on immediately and which ones must wait until critical shortages have been alleviated.

Lockheed says the "instant" inventory control system has been put into operation for every production sequence from raw material and fabrication to final assembly of C-130 Hercules and Jet Star planes in its 77-acre plant here.



INVENTORY AT A GLANCE: Boxes containing IBM cards pinpoint shortages in an instant at Marietta, Ga., plant of Lockheed Aircraft Co.

Standard Financial Corp. Enters Leasing Business

New York—Standard Financial Corp., a finance, factoring and commercial installment banking company, plans to enter the growing equipment leasing field through the formation of SFC Leasing Corp.

SFC Leasing Corp. will engage in leasing business and office equipment, production machinery, construction equipment, airplanes, rolling stock, automobiles, air conditioners, mailing machines, electrical, electronic systems, printing and miscellaneous equipment.

Ryerson Installs Heliarc Stainless Cutting Process At Four Steel Centers

Chicago—Joseph T. Ryerson & Son, Inc. has completed installation of Heliarc (tungsten-arc) stainless plate cutting equipment at four of its steel and aluminum service centers.

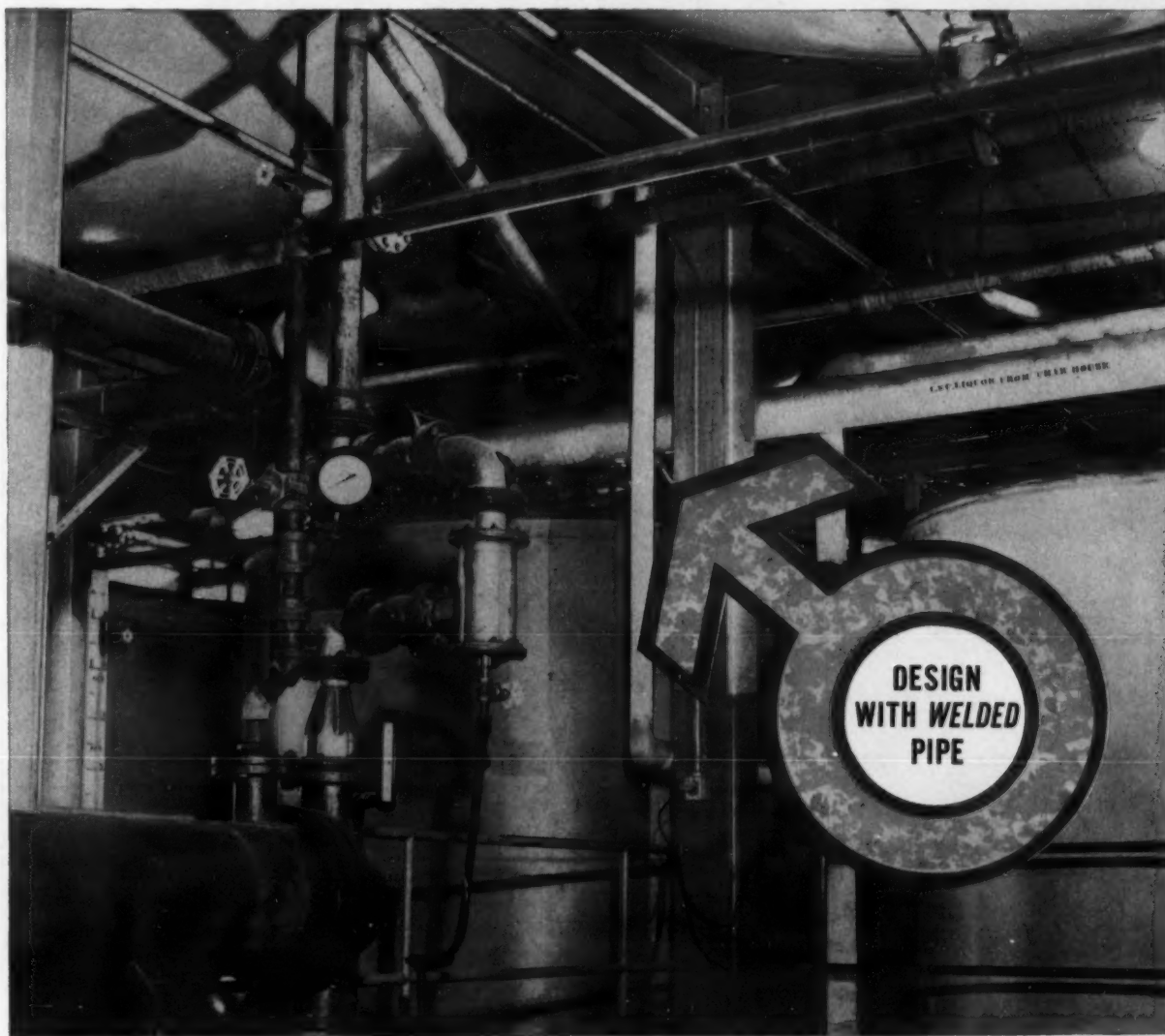
Ryerson said that cutting stainless rings, circles, and irregular shapes from plate by this method saves on machining costs because the intermediate step of removing burnt powder edges (typically produced in flame-cutting stainless using the powder method) is eliminated.

Edges cut by the process are much cleaner, free of powder contamination and retain their stainless or corrosion-resistant characteristic, he said.

"While the cost of Heliarc cutting may run higher than flame-cutting, we believe important savings will be made at the user level because the stainless as delivered is closer to a finished product," said John W. Bodwell, who heads this division of Ryerson's activities. "While it does not solve every stainless cutting problem it does represent an improvement, offers new possibilities and we are glad to be able to bring the service to our customers."

Ryerson engineers supervised the installation of the highly specialized tungsten-arc cutting equipment, incorporating improvements designed to provide the best cutting service of its kind available.

The equipment supplements the firm's extensive facilities for supplying both simple and intricate shapes flame-cut from stainless and carbon steel.



LC-404

WELDED STAINLESS PIPING WINS on "killer" duty in Southern Sugar Refinery

Corrosive liquors piped over long distances in this sugar refinery service—often at temperatures of from 180°F to 220°F—played havoc with non-ferrous metal piping. Down times occurred two or three times a year for pipe replacement and costs climbed accordingly . . . until welded stainless pipe entered the picture. Now, with Type 347 stainless on the job the problem is solved.

Frequent down times are eliminated, thanks to the alloy's superior corrosion resistance, and as an important bonus, freedom from product contamination is achieved.

• Why not check into the profit possibilities of modern welded steel piping in your own operation? Ask for helpful Bulletin 8591—and consult a quality welded steel pipe producer in your district.

Welded Steel Tube Institute, Inc.

1606-JHanna Building, Cleveland 15, Ohio

• Armco Steel Corp. • The Babcock & Wilcox Co., Tubular Products Div. • The Carpenter Steel Co., Alloy Tube Div. • Clayton Mark & Co. • Damascus Tube Co. • Jones & Laughlin Steel Corp., Electricweld Tube Div. • National Tube Div., United States Steel Corp. • Ohio Seamless Tube Div. of Copperweld Steel Co. • Republic



Steel Corp., Steel and Tubes Div. • Revere Copper and Brass Inc., Rome Manufacturing Company Div. • Sawhill Tubular Products, Inc. • Southeastern Metals Co. • The Standard Tube Co. • Superior Tube Co. • Trent Tube Co., Subs. Crucible Steel Co. of America • Union Steel Corp. • Van Huffer Tube Corp. • Wall Tube & Metal Products Co.

NAPA Office Buyers Group Slates Seminars

New York—The Office Buyers Group of the NAPA has scheduled two seminars, Nov. 16-17 and March 8-9.

The November seminar will be given in conjunction with the Insurance Company & Bank Purchasing Agents Association at the University Club, Boston.

The program includes forums on "Purchasing Department Forms" and "Handling of Small Orders." There also will be a general forum, together with roundtable or group discussions. "Standards—Office Supplies &

Furniture" will be covered by Phil Tangarone, Phoenix Mutual Life Insurance Co., Hartford, and "Open Shelf vs Closed Filing" will be discussed by E. P. Leddy, Hartford Steam Boiler Inspection & Insurance Co.

Russell Erickson, State Mutual Life Assurance Co. of America, Worcester, Mass., will speak on "The Purchasing Manual," and A. Scott Phillips, Springfield-Monarch Insurance Companies, Springfield, Mass., on "Handling of Invoices and Allocation of Departmental Charges."

The March seminar will be held in Des Moines. Subjects to be covered are: (1) Top management interest in purchasing for the office; (2) New Ideas and commodities; (3) Captive vs commercial printing; (4) Office machine maintenance; (5) Open shelf vs closed filing; (6) Data processing concepts; (7) Lease vs purchase of office equipment; (8) Domestic vs foreign office machines and equipment; (9) Forms—all types—for the office; (10) Duplicating equipment; and (11) Towels—Linen vs paper.

British P.A.'s, Like Americans, Stress More Technical Training

London, England—Like their American cousins, British purchasing agents are going back to school to brush up on their purchasing knowledge and techniques.

The British Purchasing Officers Association is offering the following series of purchasing courses for 1961:

• **Buyers' Refresher Course**—for 25-35 age group, Jan. 9-12 (residential).

• **Study Group for Stores &**

Material Controllers—Jan. 10-12 (residential).

• **Course for Buyers of Packaging**—Feb. 14-15 (non-residential).

• **Course for Buyers in the Food Manufacturing Industry**—Feb. 16-17 (non-residential).

• **Fourth Oxford Course**—Includes study groups on (a) purchasing in Europe, (b) plastics, and (c) application of operations research techniques to the work of purchasing and stores departments—April 10-14 (residential).

• **Buyers' Refresher Course**—For senior buyers above 35 years of age, Sept. 4-7 (residential).

Detroit University Offers Four-Course Program In ABC's of Purchasing

Detroit—Some purchasing ABC's (Analysis of procedures, Blanket contracts and sub-contracting, and Contracting practices) are being offered by the Institute for Business Services, University of Detroit, in a four-course program.

Interested purchasing agents can take one or all of the courses. They include:

• **Managing Procurement activities**—Sept. 16-Nov. 4.

• **Dynamic Negotiating Techniques**—Nov. 11-Dec. 6 and Jan. 6-Jan. 20.

• **Economics of Price and Cost Analysis**—Feb. 10-April 7.

• **Problem Solving Techniques for Purchasing**—April 14-June 2.

Each course consists of two hours of instruction for eight consecutive Friday nights, and every session is devoted to a different subject.

Washington Association Names Sebastian as Head

Washington—Alvin M. Sebastian, Washington Brick Co., was installed as president of the Purchasing Agents Assn. of Washington, D. C.

Other new officers include: Walter M. Prichard, Emerson Research Laboratories, first vice president; William F. Curtin, World Bank, second vice president; Mary Wibel, National Education Association, secretary; Catherine Hesse, Government Services, Inc., financial secretary; Edwin S. Mitchell, Chas. Tomkins, treasurer; Leroy Zepp, Ginn, Stockett & Fiske, assistant treasurer.

John Rooney, Melpar, Inc., is national director.

Central Illinois Group Picks McGary as Chief

Lincoln, Ill.—Loren McGary succeeded Harold E. Modrow II as president of the Purchasing Agents Assn. of Central Illinois. Modrow became national director.

Other officers serving with them include: Roland G. Lottman, vice president and program chairman; Edward A. Bayer, secretary-treasurer; John R. McDonald, VASCO chairman; James Osborn, professional development chairman; and H. W. Stuber, membership chairman.



"ALCOA ALUMINUM SCREW MACHINE STOCK ALLOY 2011 CUTS YOUR UNIT COST!"

Precision-made, high-volume screw machine parts cost less in aluminum

Final cost of your machined component . . . material cost plus production cost . . . is lower with Alcoa Alloy 2011-T3. That's because this faster machining alloy cuts production time . . . machines easier . . . can be held to close tolerances . . . gives a bright, clean finish. And Alcoa® Aluminum 2011-T3 gives you three times as many parts per pound as other, heavier metals, for still more savings. By using Alcoa Aluminum 2011-T3 Screw Machine Stock you get all the inherent advantages of automatic screw machine products.

Be sure to ask your Alcoa distributor or Alcoa sales office for your free *Alcoa Conversion Calculator*. It makes cost conversions from brass to aluminum quick, easy, finger-tip operations. Also get your free *Alcoa Screw Machine Stock Estimating and Operating Data Book*, the most comprehensive book of its kind in the screw machine field . . . packed with easy-to-find technical data.

You'll want information, too, on other Alcoa screw machine alloys: 2017-T4 or -T451 for strength at low

cost, 2024-T4 or -T351 for strength with high production, and 6061-T6 or -T651 for superior finishes, excellent joining characteristics and extra corrosion resistance. Aluminum Company of America, 846-J Alcoa Building, Pittsburgh 19, Pa.

ADDITIONAL BONUSES YOU GET WITH EVERY ALCOA ALLOY:

1. Wide range of stock sizes for important price advantages.
2. Guaranteed market for up to 60 per cent of your Alcoa Aluminum turnings and borings.
3. Extensive mill and distributor inventories to meet all requirements.
4. Chamfered ends at no extra cost.
5. Specific 12-ft lengths at no extra cost (for rounds up to 2 1/4 in.; hexagons up to 2 in.).



Boney Attends Meeting of 5th District Chairmen

Baltimore, Md.—Local chairmen in NAPA's 5th District traded their Saturday leisure for a brain picking session here.

Spearheading the drive to get more zip in 1960-61 programs, NAPA President Paisley Boney, J. P. Stevens Co., Inc., Greensboro, N. C., attended the meeting.

"Active membership in our association must make a member better qualified to contribute to his company's profit picture," Boney said.

On hand also for the professional development, public relations, and value analysis-standardization committee workshop were 5th District committee chairmen, national committee chairmen and Clint Bishop, Alan Wood Steel Co., Conshohocken, Pa., 5th District vice president.

The Program

Purchasing agents divided into three committee groups to exchange ideas and tackle common problems. The program they developed called for:

- Coordinating the efforts and activities of the three committees.
- Promotion of workshops on the local level.
- Longer service terms for local committee chairmen.

Theme of the one-day meeting was "Is Your C.C.A. (coordination, cooperation, action) approved?"

"I think action is the key word," said J. J. Rooney, Melpar Inc., Falls Church, Va., 5th District professional development committee chairman. "If you take home one new idea or innovation and put it into practice you have gained a lot."

"We have to go forward fast or we are going to go backward," Boney warned. He said that if committeemen could not handle their duties satisfactorily, they should be replaced. "The NAPA should not suffer to save the feelings of any individual," he said, "including me."

More Meat—Less Dessert

Value analysis—standardization activities came in for some critical appraisal. Boney's comment that "VASCO will grow up this year—no more medicine shows" prompted requests for clarification. "I think we can still use a little of the carnival atmosphere," said Robert L. Roberts, Westinghouse, Lester, Pa., VASCO committee chairman of the Philadelphia Assn. Boney answered that he would not object to a jazzed-up program provided 80% of it was meat.

"We have been guilty of forgetting standardization and there is a lot of productive effort that can be put there," Kenneth A. Cruise, Bendix Aviation Corp., Kansas City Div., national committee chairman, told his VASCO group.

Cruise said the main things he wanted to promote were local workshops. He announced that NAPA soon would have a VASCO speakers bureau for local associations to draw on.

For the most productive results, L. B. Whitehouse, Jr., Morton Mfg. Co., Lynchburg, Va., 5th District VASCO committee chairman, recommended that local chairmen serve at least

two years and not more than three.

The professional development people used the brainstorming technique to spark ideas for increasing their effectiveness.

"If you have a lousy program, admit it," advised R. W. Schackerman, Pennsalt Chemicals Corp., Philadelphia, 5th District professional development committee chairman. "It may forewarn someone else."

"We are not trying to birdog the operations or other committees but to help them in their

endeavors," reported G. Lloyd Nunnally, director of purchases & supplies, Commonwealth of Virginia, 5th District public relations committee chairman. He called public relations "a service agency for NAPA."

Stressing the coordination theme, M. B. Eubanks, Jr., Riegel Textile Corp., Ware Shoals, S. C., national committee chairman, suggested to the public relations men that they lend a helping hand to the program committee efforts to upgrade programs.



SHIRT-SLEEVE BRAIN-STORMING: Dist. 5 chairmen ponder methods of improving performance, solving common problems at Baltimore confab.



**your product's
reputation and sales...
can go down hill fast**

... if nuts keep coming loose

Suppose you were your own customer, and bought the product *you* make. You'd expect it to stand up to the job, whether it was a racing cart, a heavy-duty crawler, or a crusher. You'd want it to endure the bumps and thumps and constant vibration of rugged use without coming unstuck at the bolts. If a nut came loose and made you lose time or production, you'd certainly think twice about buying that product again.

This is precisely why so many of America's leading manufacturers have guaranteed the reliability of critical bolted connections on their products with Elastic Stop® nuts.

They know that a product's reputation for dependability is built in the field and they know that reorders are written in customers' maintenance records. They've verified through field experience that in the long run

Elastic Stop nuts pay their own way because the exclusive nylon locking inserts keep them from working loose... even under the most punishing conditions of shock, impact or vibration! Elastic Stop nuts are the equivalent of "free" insurance against fastener failure for *their* product!

Whether your product sells for three dollars or for thousands, we think you'll be interested in a copy of the hex nut catalog No. 706. It details the regular, thin, heavy and light hex types in USS and SAE thread series and various materials and finishes; plus many dimensional "specials".



for the ring **O** of reliability

ELASTIC STOP NUT CORPORATION OF AMERICA



Cost-Cutting Tape-Controlled Units Get the

Visitors in Chicago for the three-ring machine tool circus saw the largest collection of tape-controlled units ever assembled.

Almost 100 different numerically controlled units were shown at the three shows—the Machine Tool Exposition, the Production Engineering Show, and the Second International Machinery Show.

Numerical control makers, enjoying the biggest boom in their history, expect to sell more equipment this year than they have sold collectively in the last 10 years. Drill units are getting the biggest play, but plenty of milling machines, grinding units, lathes, planers, and positioning tables also are being sold.

Effective Tool in Cost Cutting

Manufacturers consider numerical control an effective new tool in their fight to keep costs down. Systems are particularly effective when:

- Large number of machining operations are involved.
- Steps are extremely complex.

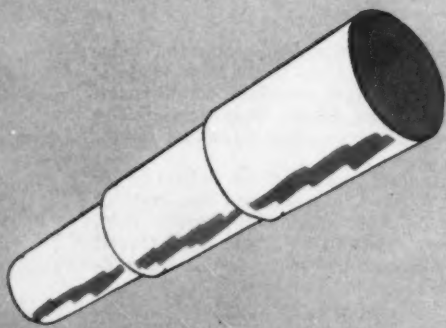
- Machining time is low in relation to setup time.
- Short lead time is necessary.
- The part is complex, but is usually made in short runs.
- Part is so complex that human errors are apt to sneak in.
- Short-run production is desirable, because rapid design changes may obsolete inventories.

Numerous Advantages

Advocates of numerical control claim these advantages: increased output, less lead time, reduced tooling costs, improved quality, greater flexibility. Here's what's behind the claims:

Increased output. Although in theory, numerical control won't make the machine work faster, numerical systems actually speed up operations three to four times. Punched tape is not bothered by fatigue or other human weaknesses, and therefore the need for constant rechecking or easing off on speeds or feeds is eliminated. The machine tool goes full speed ahead—once the program is established.

A Typical Job:

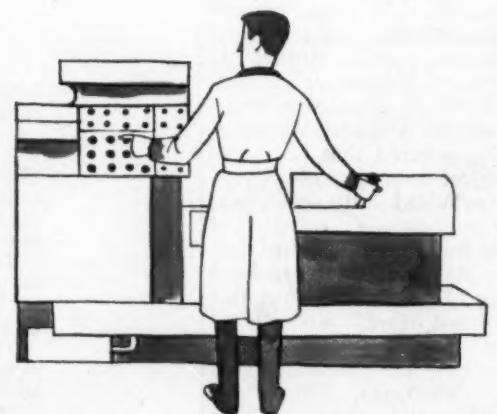


MACHINING OPERATION consists of simple turning 50 shafts — 2½ in. in dia., 10 in. long. The cost comparison includes all tooling, set-up and machining.

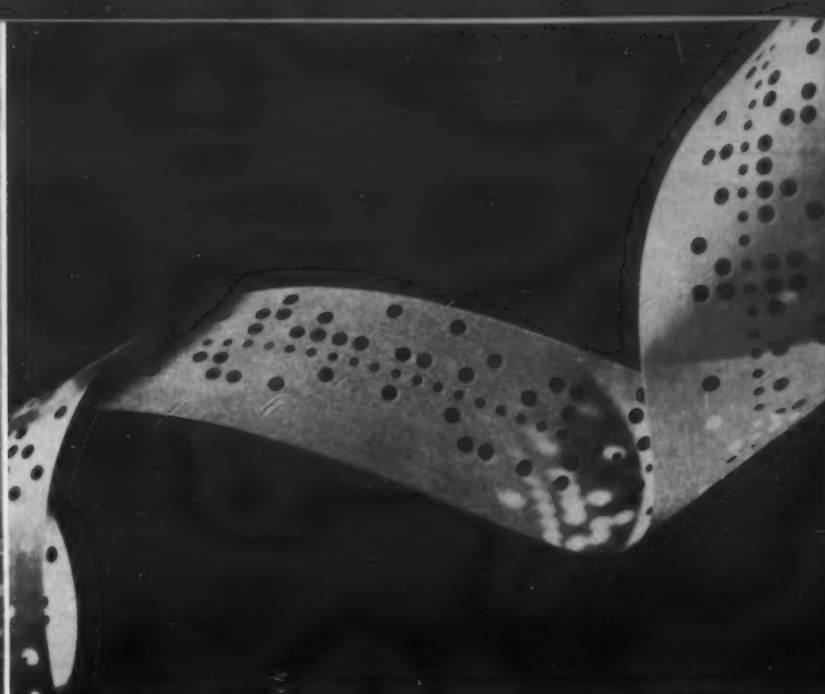
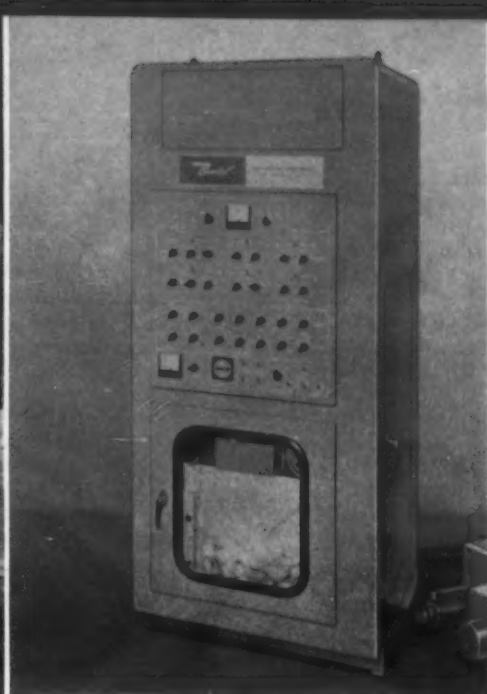
How They Used to Do It...



1 **BLUEPRINT** gave machine operator basic information. He used valuable production time to consult print before each stop to get dimensions for next operation.



2 **MACHINIST** manipulated tool controls to perform desired operation. High degree of skill was needed and close inspection necessary. **COST PER PIECE: \$1.28.**



The Kudos at Chicago's Machine Tool Shows

Less lead time. Tape eliminates templates, special gages, and fixtures. Time needed for tool-room is eliminated and (with standard tools in the turret) secondary operations such as grooving, facing, forming, etc., can be accomplished with one set-up.

Reduced tooling costs. Standard profile tools can be used in place of expensive form tools and throwaway carbide inserts replace special-geometry brazed cutters. Close control of cutting speeds and feeds permits efficient use of carbides—often allowing substituting harder grades at higher speeds. Better control over cutting speed often increases tool life 40% to 60%.

Improved quality. Numerical control provides uniform part quality since every piece is made exactly the same way. Size variation between lots is reduced, and less inspection is required. Uniform methods insure that every piece will be made by the routine judged best for the part.

Greater flexibility. The ability to change over from one part to another in minutes (or less) gives the shop versatility unheard of before the

numerical era. Parts may be run on short notice and small-lot production (especially attractive for the smaller plant) becomes economical. Changes in existing tapes can be made quickly to speed revised parts into production.

Largest Display Was Burg Tool's

Burg Tool had the largest single numerical display at Chicago—seven machines in a single booth at the Amphitheater, and two in control-makers' exhibits at Navy Pier. Cincinnati Milling had nine machines at the Machine Tool Exposition and another at Production Engineering Show. Other large exhibitors: Giddings and Lewis (six) and Fostick (five).

Altogether, 24 control system builders were represented at the three exhibits. General Electric took top spot with 26 displays, followed by Cincinnati Milling with 9, Giddings & Lewis, 6, Bendix and Norden, 5 each. Bendix and GE introduced contouring systems with simplified procedures that are designed to reduce cost and time of programming.

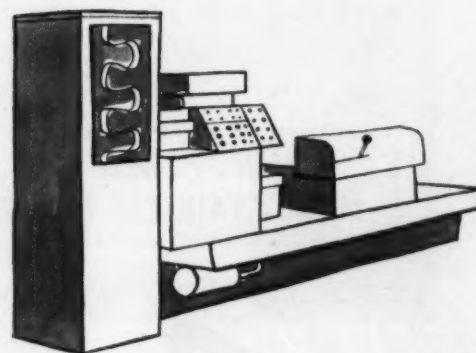
...Now It's Done by Numerical Control



1 PROGRAMMER converts data directly from blueprint to language machine can understand. X and Y coordinates, speeds, feeds, etc., are all included.



2 TYPIST takes information from operations sheet and punches it on Flexo-writer tape. Total programming and tape preparation time take only 1.4 hours.



3 TAPE, inserted into reader on machine tool control, takes over and guides tool through machining cycle, doing all operations automatically. COST PER PIECE: \$.54.

This Changing Purchasing Profession . . .

Malcolm P. Richards, manager of stores, **New York Central System**, New York, was made director of purchases. **Ralph W. Fridel**, purchasing agent, has been named director of stores. **Harold L. Riser** becomes purchasing agent (new equipment and surplus property sales). **William J. Hagerty**, assistant manager of stores, succeeds Riser as purchasing agent (maintenance of way materials and equipment). **William J. Balsden**, former general storekeeper, Collinwood, Ohio, was appointed assistant

director of stores (materials and supplies) and **Chalmers E. Miller**, assistant manager of stores, becomes assistant director of stores (methods and procedures) for the New York Central.

John Tadson has been appointed purchasing agent at the purchasing office established by **California Ink Co.** at its Berkeley, Calif., plant. He will handle all plant purchases. **A. W. Bouron**, director of purchases, will maintain his headquarters in San Francisco.

Ralph L. Lanz has been elected vice president-materials and a member of the board of directors by **Keasbey & Mattison Co.**, Philadelphia. He will be in charge of the firm's research and development, planning and inventory, and purchasing departments.

James A. Carvis was promoted

from assistant buyer to buyer in the **Packaging Materials Div.** of the purchasing department, **Abbott Laboratories**, North Chicago, Ill.

H. C. Chobanian has been made assistant to the manager of materials, **Allis-Chalmers Industries Group**, Milwaukee. **R. A. Pfau** succeeds Chobanian as office supervisor, purchasing department.

John Haller has been named purchasing agent for **Aero Design & Engineering Co.**, Bethany, Okla. He had been head of the engineering liaison section of the Aero Commander plant.

Charles R. Nelson, office manager of the purchasing department, **Missouri Pacific Railroad**, St. Louis, retired after 50 years with the railroad.

George E. Hamilton was appointed purchasing and sales manager of **Gwaltney Inc.**, Smithfield, Va.

Walter Follette succeeds **Harry S. Lowe** as purchasing agent for **John Bean Div., Food Machinery & Chemical Corp.**, Lansing, Mich. Lowe is retiring after more



R. L. LANZ



WALTER FOLLETTE HAROLD GROESBECK

than 40 years' service with the division. **Harold Groesbeck** becomes assistant purchasing agent.

S. H. Teel and **W. W. Dathe** have been named purchase branch managers for **General Motors Acceptance Corp.** at Columbus, Ga., and Tyler, Tex., respectively. **C. F. Kimmey** and **R. H. Cox** have been appointed purchase branch managers for Wichita Falls and Sheffield, Ala.



Express Freight Lines, Inc., Milwaukee, Wisconsin recently purchased fifteen 40' Fruehauf Stainless Steel Volume☆Vans, with six more on order. Last year Express Freight Lines' fleet—almost 75% Fruehauf—clocked over 3,000,000 miles throughout Wisconsin, Illinois, Indiana, and Michigan.

No Fruehauf Stainless Van Has Ever Worn Out!

Hundreds of Fruehauf Stainless Steel units—Reefers, Volume☆Vans, and Open-Top Trailers—have been in continuous service for fifteen years and longer. And there are good reasons for this longer life. Lifetime features have always been built into Fruehaufs, features that offer the greatest dollar-for-dollar value for years to come.

**NOW . . . NEW LOW PRICES
MAKE STAINLESS EASIER TO OWN!**

- ★ High Payload Capacity
- ★ Low Maintenance Cost
- ★ Higher Trade-in Value
- ★ Money-Saving Engineering
- ★ Lifetime Stainless Quality

See the new profit-builder 1960
Fruehauf Stainless Steel Vans
at your Fruehauf Branch!

For Forty-Six Years—World's Largest Builder of Truck-Trailers!



FRUEHAUF TRAILER COMPANY

Detroit 32, Michigan • Los Angeles 58, California

Texas Holds Up Ban On Foreign Road Materials

Austin, Tex.—Complaints from foreign suppliers have forced the Texas Highway Commission to delay enforcing its ban against the use of foreign materials, primarily steel, in building state roads.

The ban, scheduled to go into effect the end of this month, was postponed until Nov. 1 in order to give opponents of the measure—largely importers of foreign steel—an opportunity to file briefs supporting their position.

The battle against the use of foreign materials in public roads has been going on in Texas, as well as other states which have been hard hit by foreign competition, for more than two years. Texas, in fact, has had an "unofficial" order against the use of these materials in projects on which only state money is spent.

During recent meetings before the Texas Highway Commission, officials representing foreign suppliers and affiliated organizations charged that the proposed ban would be illegal. The commission pointed out that this wasn't quite true.

When the Department of Commerce was asked some time ago if such orders could legally be applied to projects jointly financed by state and federal funds, it was suggested that the "Buy American Act" be used in such cases.

The Department had planned to begin enforcement of this suggestion May 1, but on April 19, the Bureau of Public Roads notified its regional officials that the deadline was being delayed "pending resolution of various legal and other questions raised by several states." These questions still have not been resolved.

While there is no federal law that will prohibit the Texas ban, several foreign suppliers at the hearing said the new policy may violate the current state law requiring competitive bidding to obtain lowest prices on work.

In the World of Sales . . .

George C. Burke has been appointed district manager in Indiana for **H. M. Harper Co.** with headquarters in South Bend.

Willard E. Anderson has been assigned the new post of regional manager for the eastern central area of the country, **Parker-Hannifin Corp.** He will headquarter at the company's Cleveland sales office.

John A. Fairbank has been promoted to Philadelphia district manager for **Conoflow Corp.**

Fenton J. Dowling was named western area manager of sales, **Canco Div., American Can Co.** He will be located at the firm's San Francisco office.

Harold Prigoff, district sales manager in charge of eastern sales for **Gardner Machine Co.**, Beloit, Wis., retired after 37 years service.

Samuel M. Marshall becomes district sales manager, Indianapolis office, **Jones & Laughlin Steel Corp.'s Stainless & Strip Div.**

Larry L. Jones has been assigned the new post of sales manager—trailers for **Sparton Railway Equipment Div., Sparton Corp.**, Detroit.

John P. Fierst has been elevated to field sales manager, a new post, by **Sharon Steel Corp.**, Sharon, Pa.

Walter J. Hegedus was appointed field sales engineer in the Pittsburgh area to handle sales of **Farrel-Birmingham Co., Inc.'s** general products and rubber and plastics machinery lines. He replaces **David Neill**, who transferred to firm's home offices in Ansonia, Conn., as manager of roll grinding sales.

Roland Louis Guerin, Jr. has joined **BMW Mfg. Co., Inc.**, Torrance, Calif., as sales manager. He had been with the **Clearing & Western Design Divisions of U. S. Industries**, Santa Barbara, Calif.

R. L. Hanes was advanced to general manager of tubular sales, **Colorado Fuel & Iron Corp.**, Denver.

James K. Chaney has been made district manager of the Kansas City, Mo., office of **Byron Jackson Pumps, Inc.**

Robert S. Bradford moves up to vice president of sales and marketing at **Permacel**, division of **Johnson & Johnson**, New Brunswick, N. J. He succeeds **George A. Fitzgerald** who was promoted to president of the firm.

Don Fullerton has been appointed district sales manager for **Harvey Aluminum** in Portland, Ore.

James K. Chaney has been transferred to **Byron Jackson Pumps, Inc.'s** Kansas City, Mo., office as district manager.

William J. Schoenberger has been made northeast regional

manager for **Philco Corp.'s** government and industrial group, Wellesley, Mass.

John A. Brenneis and **Ned J. Walsh** have been appointed regional sales manager for Mobilift fork lift trucks and towing tractors, **Mobilift Div., Minneapolis-Moline Co.**, at New York City and Fort Wayne, Ind., headquarters, respectively.

J. A. O'Brien was appointed national sales manager, electron-

ics **Continental Connector Div., DeJur-Amsco Corp.**, Long Island City, N. Y.

Lee Tarricone has been named sales manager for **General Kinetics Corp.**, Englewood, N. J.

C. L. McDonald was named city sales manager in Dallas for **Selig Co. of Texas, Inc.**

Richard P. Turner has been promoted to the new post of manager of systems sales in the Mili-

tary Products Div., **Hoffman Electronics Corp.**, Los Angeles. **Kenneth C. McClellan** succeeds **Turner** as manager of the division's Dayton office.

Larrence R. Gard, Jr., was advanced to assistant manager of distributor sales, **Dodge Mfg. Corp.**, Mishawaka, Ind.

William A. Baltzell has been elected vice president of **Oakite Products, Inc.**, New York. He will continue to hold his post of industrial sales manager.

Robert H. Gay has been advanced to northeast regional manager, **AP Parts Corp.**, Toledo.

Garth H. Quinn was elevated to vice president in charge of sales by **Burroughs Wellcome & Co.**, Tuckahoe, N. Y.

Philip R. Cross was appointed director of sales, **Vacu-dry Co.**, Oakland, Calif. He will also continue as product manager.

James B. McQuilken has been made eastern sales manager for **Roche Laboratories**, a division of **Hoffman-La Roche**, Nutley, N. J.

Lewis G. Rogers has been appointed to the new position of sales manager, **Industrial & Military Products Div., Bulova Watch Co., Inc.**, Jackson Heights, N. Y.

METALOGICS* meets your most exacting schedules —on time

What do you need right now . . . tomorrow . . . or in the future? Whatever you need, Ryerson is there—"the fastest with the mostest"—to keep pace with your production lines. Our service in depth is the secret. The instant you order steel, aluminum, plastics or metalworking machinery, Metalogics goes to work—assuring delivery exactly as specified.

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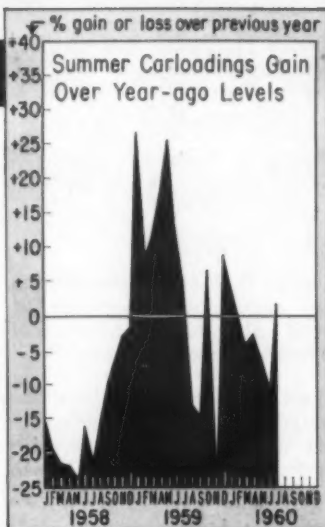


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P/W TRANSPORTATION MEMOS

MORE PRODUCTS FOR PIGGYBACK: Petroleum products and flammable chemicals may soon be hauled in piggyback service for the first time. The Chicago & North Western Ry. has been given approval to carry these commodities (hitherto restricted) in trailer-on-flatcar service by the Association of American Railroads' Bureau of Explosives.

The North Western, first railroad to get the green light from the AAR, has been yard-testing piggyback cars loaded with liquids for a number of months to find out how they would hold up.

The AAR's Bureau of Explosives observed the tests and recently gave its final approval. The North Western expects it will take some time to develop a specific rate structure to take advantage of the newly developed service.

LESS DAMAGE—HIGHER COST: Damage-free cars, which

shippers throughout the country have taken a shine to, are proving costly for a number of railroads, because shippers often neglect to replace cross members after cars are unloaded at plant sites. These cross members, are used to keep commodities blocked off in cars.

One Western road currently is circulating reports to shippers that it spent \$73,000 to replace equipment in 3,800 DF-type cars during one recent three-month period. It is asking shippers to cooperate in putting cross members back in the cars.

NEW GSA BOOKLET: The General Services Administration has published a 44-page booklet, titled "Loss and Damage," outlining ways to cut damage to shipments of government property.

Topics discussed include: Preservation, Packaging, and Packing; Marking and Tagging Shipments; Handling, Assembling, and Delivering Shipments to Carriers; Inspection of Carrier's Equipment; Securing Shipments; Clearance by Shipments of Excessive Dimensions; and Perishable Shipments—Protective Service Required.

The booklet is being distributed to federal agencies and will be available to the public through the Government Printing Office, Superintendent of Documents, Washington 25, D. C. at 35¢ a copy.

REDUCED PALLET RATES: The Traffic Executive Assn.—Eastern Railroads has been calling shipper attention to a rate reduction, recently put into effect by the Eastern railroads, on used pallets, platforms, or skids.

An Eastern rail executive said a mileage scale of rates has been established, subject to minimum weights of 15,000, 20,000, 25,000 and 30,000 lb. The new rates are aimed "to induce movement of palletized freight in rail service by providing an economical means of returning the pallets to the point of origin without accumulating 40,000 lb., which was formerly the prescribed minimum weight." He said under the new system, the reductions in cost on a 15,000-lb. shipment, for example, range up to 36% at 250 miles.

BETTER TRUCK SERVICE: The Werner Transportation Co. expects to expedite freight handling and eliminate delays due to traffic congestion with the opening of its new \$1.5-million terminal in suburban Chicago.

The terminal area covers eight acres. A Towveyor system capable of moving 6-million lb. of less-truckload freight daily across the dock has been installed along with self-leveling dock plates, a pneumatic tube system, and safety-check lanes for vehicles.

WHISTLESTOPS: A reduction of 15% in less-than-carload rates for packaged wire, wood fiber, and vegetable fiber brushes shipped between the Midwest and East and West coasts has been posted by Lifschultz Fast Freight. . . . A new company, Private Air Travel, Inc. Baltimore, Md. opened its doors recently, offering contract air service for business and industrial firms throughout the East. . . . Motor carriers operating between the Chicago area and the Port of New York have reduced less-truckload class rates on foreign commerce to effect a lower scale of rates than those on domestic traffic. . . . The ICC has ruled that railroads now may extend the present credit periods of 48 and 96 hours for payment of carload freight service to 96 and 120 hours, which is the time allowed on less-carload freight.

SILICONE NEWS from Dow Corning

What Price Difference?

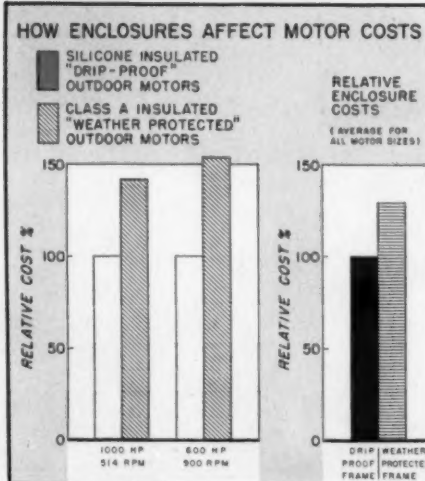


There's No Price Premium . . . Just Savings . . . When You Specify Silicone Insulation

For Outdoor Locations: You can save 30% and more on initial cost of form-wound motors by specifying silicone insulation systems made with Silastic, the Dow Corning silicone rubber. Here's why: 1) Silicone insulated motors are now available at no price premium; 2) The insulation system itself is self-protecting, shrugs off weather, humidity, corrosion, dust, even flooding. There's no need for elaborate enclosures that push motor prices up and up. The chart (right) shows how much you save by specifying silicone insulated open motors.

For Indoor Locations: Where ambient temperatures are high, where corrosive fumes or industrial contaminants are present; where relative humidity is pushing 100%; where motors are hosed down — in all these applications and others, too, expensive motor enclosures, and often expensive ducting as well, can be eliminated by specifying silicone insulation.

For Any Location: Silicone insulation systems increase motor service factor by as much as 15 to 30% because of their greater thermal stability. This increased service factor means there's no need to overmotor for occasional overloads . . . and suffer the power factor penalty of part loaded induction motors.



This chart shows one of the ways you save by specifying motors insulated with Silastic.

New brochure on Silicone Insulation. Write for your free copy.

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MIDLAND, MICHIGAN

ATLANTA BOSTON CHICAGO CLEVELAND DALLAS LOS ANGELES NEW YORK WASHINGTON, D. C.

Curve-Sided Hopper Cars Carry Bigger Loads

New York—All-aluminum covered hopper cars, embodying a new design principle that permits railroads a 10-ton payload increase over previous types, are now rolling off a Canadian assembly line.

The cars, developed by Aluminium, Ltd., a major North American producer, are being built by Marine Industries Ltd., Sorel, Quebec. They were designed specifically for the transport of chemicals, food stuffs, and refined ores.

The key design feature of the cars, an Aluminium official explained, is a curved side, which offers significant advantages in simplified fabricating procedures and easier unloading and cleaning.

He said the design is expected to make cost per ton of capacity lower than conventional steel equipment because the curved shape permits the least amount of metal to enclose the largest volume of space. This results in

a 10% reduction in the number of cars in any given operation.

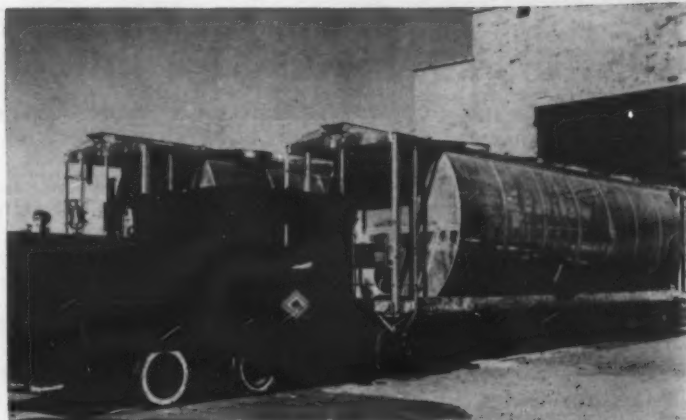
The new design eliminates the side posts and the full length of the center sill between the bolsters. As a result, it permits a sizable decrease in the amount of metal and welding footage, thus lowering construction costs.

A unique feature of construction is the method of curving and attaching the sides to the body of the car. Rather than rolling the curve into the side sheets, they are welded in the flat condition and then simply fitted to the

curved shape of the bolsters and partitions.

Another distinctive feature, the official said, is the five-foot module used in the design of the car. The length and, consequently, the cubic capacity of the car can be increased or decreased by one module without any major design change.

As a result, cars of 3,500, 3,000 and 2,500 cu. ft. can be produced on the same set of jigs. The design concept is here being used to fullest advantage in the railway field.



HOPPER CAR: Aluminium, Ltd., claims curved sides represent major development in railway rolling stock, permit 10-ton payload increase.

Pan Am and Ryder Link U. S. and Latin America In Air-Freight Network

Miami—An air-truck network to provide fast freight service between the United States and Latin American points has been set up by Pan American World Airways and Ryder System, Inc.

Starting Sept. 21, Pan American will fly freight between Latin American cities and Miami. Ryder will be responsible for domestic shipments to and from Miami.

Inaugural service will be to San Juan, Puerto Rico. Other points including Port Au Prince, Haiti; Kingston, Jamaica; Balboa, Canal Zone, and Caracas, Venezuela, will be added before the first of the year.

Charges on the service will compare favorably with all-surface transportation costs, a spokesman said, "particularly when a value is placed on the reduced transit time of the freight movement."

As an example, officials said a 15,000 lb. shipment forwarded from San Juan on a Monday night will be delivered in Atlanta, Ga., the following Thursday morning for \$7.10 per 100 lb., "a rate only slightly higher than the all-surface rate but less than half the transit time."

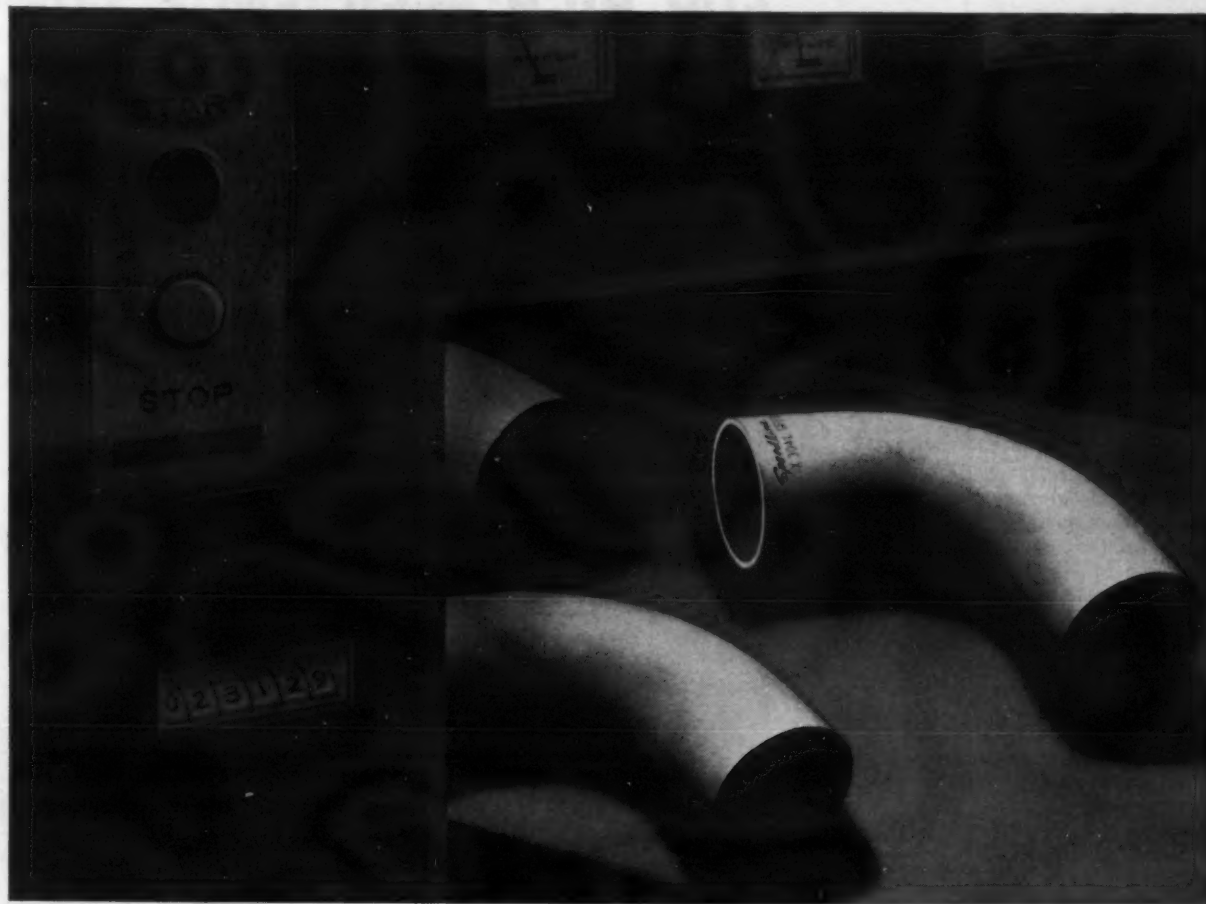
The new freight service will use a single through shipping document and, for the first time, a single through tariff, eliminating multiple shipping documents and a combination of complex rate structures.

NYC Changes Service

Albany, N. Y.—The New York Central Railroad, as part of its continuing program to consolidate freight operations, plans to make the Dunkirk Station a freight center for 10 communities in Erie, and Chautauqua counties.

The Central said it will close stations at Fredonia, Silver Creek, Falconer, Irving, Angola, Athol Springs, Sinclairville, Gerry, and Frewsburg. The Public Service Commission has given its approval for the change in western New York.

THERE IS A DIFFERENCE IN PIPE FITTINGS



Speedline FITTINGS ARE MADE TO MEET CRITICAL STANDARDS

Now you can comply with the severest codes and save up to 50% on critical stainless steel process lines when you specify SPEEDLINE Fittings and economical light wall Schedule 5 or 10 pipe.

The new issue of Code for Pressure Piping ASA B31.3-1959, for example, allows a design pressure of 611 psi for 2" ips Schedule 5, Type 304L process pipe at 100°F. Under the same conditions, allowable design pressure for 1½" ips pipe would be 768 psi; for 1" ips, 1122 psi.

Since SPEEDLINE Fittings have been specially designed for use with light wall pipe, they can result in substantial installation economies whether you plan to butt-weld, flange or socket-join your lines. Yet long tangent SPEEDLINE Fittings cost no more than other fittings which are suitable for "non-critical" service only.

Let a SPEEDLINE Distributor show you why there is a difference with SPEEDLINE Fittings... and what that difference can mean at your plant. Complete Catalog on request.

For Distributor Listings see pages 1513 to 1516 Chemical Engineering Catalog.

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CORROSION-RESISTANT FITTINGS
STAINLESS STEEL • ALUMINUM • SPECIAL ALLOYS



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Controls Co. Slates \$1-Million for Modernizing

Milwaukee—Controls Co. of America plans to spend \$1-million to increase the efficiency and output of its plants here.

Much of the money will be used to convert and retool the former Chain Belt ordnance plant at Wauwatosa, acquired by Controls earlier this year for \$570,000.

The modernization program includes:

- Construction of a 30,000 sq. ft. addition at the Wauwatosa plant at 4212 N. 124 St., for warehousing, bringing the plant's size to 95,000 sq. ft.

- Equipping the plant with new tools to streamline manufacturing operations, mostly for heating and ventilating controls.

- Rearrangement of production layouts at Milwaukee plant No. 1 at 2450 N. 32nd St.

- Converting a 6,000 sq. ft. building at Wauwatosa site into a laboratory for advanced research products.

Roy W. Johnson, board chairman, noted that when the projects are completed, Controls will have about 200,000 sq. ft. of plant space here, the largest of the firm's 21-plant locations.

The Milwaukee operations, primarily in the production of heating, ventilating, and air con-

ditioning controls, account for about 20% of the company's total sales, which last year exceeded \$51.4-million.

Controls Co. also is expanding its facilities outside Milwaukee. At Tempe, Ariz. the firm has started production of silicon semiconductor devices and at El Segundo, Calif., has begun pilot plant production of electroluminescent panels.

Overseas, the company is building a plant in France and is studying the idea of locating a factory in England.

New Move on 'Buy America' Theme Is Expected in Congress Next Year

Washington—A bill introduced late in the Congressional session by Rep. William K. Van Pelt (R.-Wis.) would have amended the 1933 Buy America Act and removed much of the discretionary powers of heads of federal agencies to make foreign purchases.

Under existing law federal agency heads can buy from foreigners if such a purchase is not "inconsistent with the public interest" and if the cost of foreign-

made goods undercuts domestic price tags. Van Pelt's bill sought to provide that the federal government could make foreign purchases only if domestically-made goods were not available.

The congressman's bill was introduced August 17 as a direct result of contracts for British-made generating equipment by the Tennessee Valley Authority. It died in the public works committee. He is expected to re-introduce it again next year.

IMC Establishes Marketing Unit to Coordinate Sales

Westbury, N. Y.—IMC Magnetics Corp. has organized a marketing division to push sales of motors and components products to the industrial and military markets on a nationwide basis.

Charles M. Wohlstetter, board chairman said the new division will coordinate all direct sales activities for the corporation in addition to coordinating all advertising, sales promotion, and market research functions.

Headquarters for the new corporate unit will be in Maywood, Calif., where IMC has one of its manufacturing plants. Others are located at Phoenix and here.

IMC Magnetics produces servomechanism components, delay lines, valves, fuel atomizers, fractional horsepower motors, solenoids, and computer components.

United Control Installs High Frequency Lighting In New Electronics Plant

Seattle—United Control Corp. is equipping its new electronics plant at nearby Bellevue with a high-frequency lighting system.

United Control decided on the installation, believed to be the largest of its kind, because it gives off less heat than conventional installations. The load on the air conditioning system is also reduced under the high-frequency setup. Better light and absence of flicker are cited as other advantages.

Current pulsing at the rate of 840 cycles a second, instead of the normal 60 cycles will be used to light a 107,000 sq. ft. area of the building.

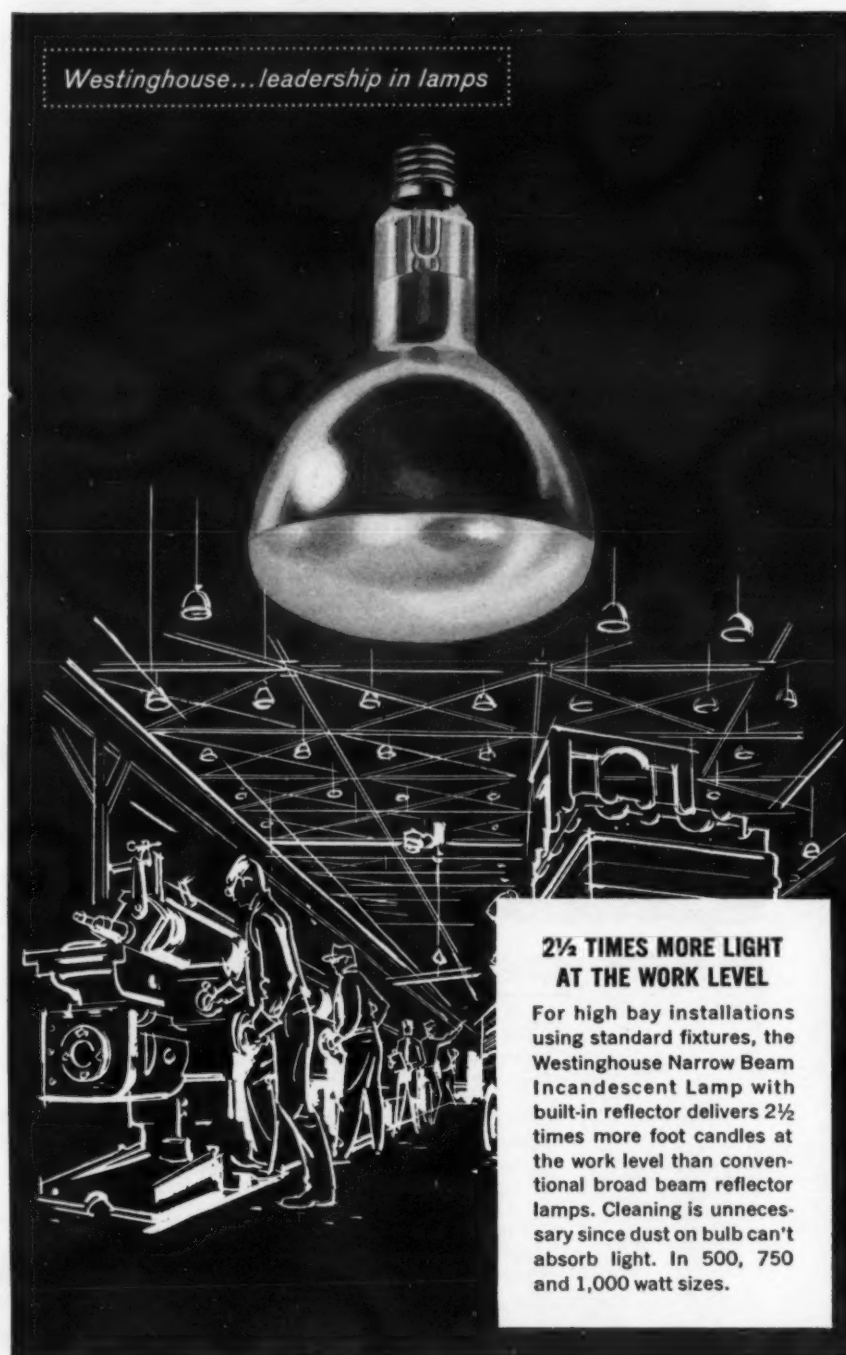
Vitro Opens L.A. Office

New York—Vitro Corp. of America, engineering firm, has opened an office in Los Angeles to improve technical service to its customers in the electronics, space, weapons, chemical, and nuclear industries.

The new facility includes an electronic marketing, maintenance, and service operation, product showrooms, and administrative offices.

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2½ TIMES MORE LIGHT AT THE WORK LEVEL

For high bay installations using standard fixtures, the Westinghouse Narrow Beam Incandescent Lamp with built-in reflector delivers 2½ times more foot candles at the work level than conventional broad beam reflector lamps. Cleaning is unnecessary since dust on bulb can't absorb light. In 500, 750 and 1,000 watt sizes.



The high efficiency lamps shown above demonstrate the ability of Westinghouse to reduce lighting costs. In the Westinghouse line you'll find the correct lamp to give you one or more of the following benefits: greatest savings in lamp purchases; lowest maintenance cost; the most light at the same or lower cost; the most efficient use of power. Call your Westinghouse Lamp Representative today. You can be sure . . . if it's Westinghouse.

Westinghouse Lamp Division, Westinghouse Electric Corporation, Bloomfield, New Jersey

Foreign News in Brief

Germany Boosts Imports

Bonn—West German imports from the United States increased 54% during the first six months this year over similar period in 1959. The value of the imports jumped to over \$687-million.

The German-American Chamber of Commerce expects this trend to continue for the rest of the year, especially in view of the labor shortage and production bottlenecks.

German exports to the U. S. during the same period increased

by roughly 10%, to \$441.1-million. In the second quarter exports at \$202.9-million were more than 10% below the corresponding period last year.

Jumbo Tank Cars

Montreal—B. A. Shawinigan Ltd. has begun trans-Canada shipment of phenol in new 20,000 gal. tank cars.

The company said these cars permit shipments more than twice the size of those formerly

possible in regular size 8,000 gal. tank cars.

Mounted on roller bearings, the 52 ft. tank cars are equipped with 100-ton trucks and are capable of carrying a load of 250,000 lb.

CNR Reorganizes

Montreal—The Canadian National Railways is reorganizing its administrative setup in order to decentralize authority.

President Donald Gordon said

the new setup follows two years of study and is designed to make the railway management more flexible so that it can meet increased competition from other forms of transportation.

Identical Bids

Melbourne—Electrical cable buyers are stumping for anti-monopoly laws because of rash of identical bids.

Australia has no anti-monopoly legislation and such an action is not illegal. Buyers for semi-governmental and other large scale users have claimed that often as many as 15 bids are re-

ceived and that none of them will show a variation of as much as one penny on amounts going into millions of dollars.

A series of conferences have been arranged, and it is expected that Federal authorities will be pressed to speed up the introduction of legislation, based on U. S. law which prohibits conspiracy to fix prices and to set up monopolies.

British Motors Subsidiary

London—The British Motor Co. plans to form a wholly-owned Swedish subsidiary in the near future to market and service its entire line of autos and commercial vehicles.

Arrangements are being concluded with BMC distributors in Stockholm and Malmo.

A spokesman said the reorganization is aimed at taking advantage of the new sales opportunities under the Free Trade Association. Sweden cut its auto tariff by 20% in June to members of the EFTA.

Air Freight Talks

Tokyo—Osaka Kaiun (Marine Transport) Co. Ltd., which began handling air freight earlier this year, is negotiating to tie up with Air Freight Service of the U. S.

In the year ending June 1, Osaka Kaiun handled a total of 1,347,794 tons of cargo, mostly transistor radios and textiles, to all countries for Japan Air Lines, Pan American, Northwest, and SAS. The firm is seeking ties to U. S. freight handler, not only to expand business but to insure dependable delivery service.

Italian Tax Bill

Rome—The Italian government has approved a bill which will grant refunds on export sales taxes.

Formerly, this general "turn-over tax" had been levied on all sales of goods and services in Italy, with few exceptions. Italian motor cars will have an 8% tax refund when exported and imported cars will carry a similar compensatory tax.

Italian manufacturers had supported the measure to meet foreign competition on the domestic and world markets.

Japanese Mergers

Tokyo—Three Japanese chemical firms will merge later this year to become the country's largest chemical firm. They are Toyo Koatsu, Mitsui Chemical and Miike Synthetic Chemical.

The first major project of the new enterprise will be a \$55-million petrochemical complex at Sakai, near Osaka.

Electronic-Controlled Subway

Hamburg, Germany—An electronic computer will run the Hamburg subway system by storing timetable data. The computer also will be programmed to handle unusual conditions, such as construction work requiring slowdown or route switching. It will start operating in 1962.

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UP TO 60% GREATER USEFUL LIGHT OUTPUT

Because it directs 60% more light downward than conventional types, the Westinghouse Reflector Fluorescent Lamp is ideal for displays and work areas. Comes in bi-pin and single pin types. The latter can be rotated for precise light control. Built-in reflector cuts maintenance. In 48 and 96 in. sizes; 40 and 90 watts.

UP TO 20% MORE LIGHT THAN OLDER TYPES

Besides delivering up to 20% more light at the work level, Westinghouse Lifeguard Mercury Lamps maintain up to 86% of initial output after 9,000 hours of use and provide 12,000 hours of high light output. Lifeguard Arc Tube prevents darkening of glass with ensuing loss of light. In the long run, this is the most economical lamp you can buy. In 400, 700 and 1,000 watts.

Westinghouse



Foreign Perspective

SEPTEMBER 12-18

London—Copper prices have started what many observers call a serious slide on the market here, as the red metal dipped below the \$672/ton mark—considered a major breakthrough on the way down.

Chiefly responsible for the decline were decisions by British consumers that their stocks were high enough—for the time being at any rate.

While many buyers had been alarmed at the prospects of a big holdup in supplies—especially in view of the continuing Congo crisis—they now seem entirely convinced that world supplies even without the Congo should be sufficient to meet world demand for some time ahead.

Many are even saying prices will fall still further, unless . . .

- U. S. demand picks up with resumption of fall and winter business activity.
- Major producers begin cutting back production to exert some control over the market.

This latter possibility will be tested out shortly, since both Anglo-American and Rhodesian Selection Trust, chief U. K. suppliers, have never concealed their aversion to sharp movements in copper prices and both are expected to act promptly if the current slide gains momentum.



Alpha-titanium, containing 2.5% tin, is the structural material used for the X-15 manned spaceship. Addition of tin provides greater creep resistance. This alloy is widely used in aircraft applications. It has the characteristics of high-grade steel, but only half the weight.

Tin alloys may be used as hot-dipped or electrodeposited coatings on other metals or they may be cast as the base metal. Use of tin will result in one or more of these characteristics being added to finished products:

- malleability • nontoxicity
- lubricity • corrosion resistance
- solderability • wear resistance
- excellent bearing qualities
- ductility • attractive finish

Tin is commonly alloyed with copper, lead, antimony, bismuth, aluminum or iron; less commonly with nickel, cadmium, magnesium, zinc, mercury, silver, manganese, tellurium.

Electronic components use tin in many applications. Transistor leads and caps are tinned. Tin-indium solder joins glass to metal, glass to glass. Printed circuits use 60-40 tin-lead solder. Potentiometer brush arms and springs are made of tin-containing spring-temper phosphor bronze. A tin chemical, bismuth-stannate, stabilizes capacitors against temperature change.



Write today for more data on these items or for a free subscription to TIN NEWS—a monthly bulletin on tin supply, prices and new uses.

The Malayan Tin Bureau
Dept. 503, 2000 K Street, N.W., Washington 6, D.C.

Copper may not be the only metal headed for producer-imposed restrictions. The United Nations Lead-Zinc Study Group, meeting in Geneva this month, may be spurred to slap export restrictions on the two nonferrous metals to check current price tumbles.

London zinc has slipped steadily throughout 1960 to a current \$240/ton mark—with little indication of any leveling out. London sources blame continued U. S. overproduction and British Board of Trade sales for the current zinc softness.

While the Board of Trade offer to sell 1,600 tons on the market between October, 1960, and March of next year certainly can't be called a "dump" operation, it is playing a major role in keeping prices weak.

Price weakness is also showing up in other metal categories besides nonferrous.

Imperial Chemical Industries Ltd., for example, has cut its base prices of wrought titanium from 10% on plate, wire, and alloy sheet, to 15% on rod, extrusions, and commercially pure sheet.

The new prices, fifth such reduction in the last six years, affect deliveries after November 1.

Typical new prices per pound are: hot rolled plate, 1-in. thick, down 70 cents to \$6.86; alloy sheet, 6-ft x 3-ft x 20 gage, down \$2.10 to \$18.90; commercially pure sheet, 8-ft. x 2-ft. x 20 gage, down \$1.86 to \$11.22; rolled rod, 1-in. diameter, down \$1.40 to \$7.84; and extrusions, down \$2.10 to \$12.60.

Meanwhile, Imperial officials have announced major deals with two non-British firms: Montecatini, of Milan, Italy, and Callery Chemical Co. of Pittsburgh, Pa.

In the Montecatini agreement, ICI has obtained a patent license covering "exclusive production in the U. K." of staple fibers, filament yarns, and textile monofilaments from polypropylene.

The British firm is already licensed by Montecatini to produce polypropylene as a plastic, and the new plant, slated to turn out 10,000 tons/year, is now set to go on stream in Wilton, Yorkshire, later this year.

ICI's agreement with Callery Chemical provides for an "exchange of assessment information in certain aspects of the field of boron compounds," the company said.

The Anglo-American agreement covers the acquisition by either company of non-exclusive royalty-bearing licenses under the other's patents. Technical information may also be exchanged.

Geneva—Member nations of the General Agreement on Tariffs and Trade started preparing here last week for their upcoming general sessions next January.

While the general meeting will approve or reject all final tariff changes, the bulk of the major deals will be hammered out by special representatives who will meet in closed-door sessions, which could drag on through most of the fall months.

Whatever deals are worked out, however, one thing remains clear at this point: American P.A.'s will be buying a wider variety of foreign goods in greater quantities than ever before as a result of the GATT meetings.

United States delegates, headed by Clarence B. Randall, however, aren't going into the meetings with any kind of a giveaway program. They're armed with a list of products on which America will demand more liberal treatment before any reciprocal cuts are granted. Tobacco reportedly heads this list.

Vancouver, B. C.—Construction will begin some time this month on the first phase of a \$93-million natural gas pipeline system in northeastern British Columbia. The pipeline, to be completed in Dec. 1961, will deliver gas to markets in southern British Columbia and the United States.

British steel industries have been anxiously awaiting the go-ahead order for construction. They are anticipating sizable boosts in orders for pipe.

Canada's steel mills did not share to any great extent when the first oil and gas pipelines were constructed. But now Canadian markets can produce wide skelp and pipe fabrication facilities have been constructed.

The new 30-in. trunk line will extend nearly 250 miles south from Fort Nelson to connect with existing West Coast transmission pipeline facilities near Chetwynd, B. C.

Vancouver, B. C.—Pacific Petroleum Ltd., one of Canada's leading independent oil companies, will take over all Canadian holdings of Phillips Petroleum Co. and Sunray Oil Co., in a deal reportedly valued at \$115-million.

Included in the purchase are more than 2-million acres of proved and potential oil and gas lands—mostly in the Forst Nelson area of Northeastern British Columbia.

In addition, Pacific Pete will acquire Phillips' 50% interest in refineries at Taylow and Dawson Creek, now owned jointly by the American firm and Pacific. Phillips' marketing system of retail service stations and bulk outlets in the Peace River area and along the Alaska highway are also included in the sale.

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to put you in direct contact with the manufacturers whose wide variety of production is available to you. An accurate plant by plant, machine by machine study has been made and electronically tabulated by Northern Natural Gas Company and other natural gas utilities serving the 5 Northern Plains States. Qualified producers are being referred to industry quickly and without obligation.

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NORTHERN NATURAL GAS COMPANY
GENERAL OFFICES: OMAHA, NEBRASKA

This Unique Service Is Yours... Simply For the Asking

Japan Targets Big Boost in Electronics Output

Tokyo—Japan's electronic industry is initiating a program to boost production 81% by 1964. The target would put sales at \$1,752,000,000.

An earlier plan called for raising production 31% over last year, but industry sources pointed out the increase was too small in view of the government's plan to double the national income by 1964.

The Program

The new program emphasizes both the manufacture of industrial electronic machinery and also research and development of materials for solid electronic circuits. It proposes:

- Development of electronic computers, control engineering devices, and other new products.
- Higher standards of training for engineers and technicians.
- Efficient operation of foreign licensing agreements.
- Industry promotion for the manufacture of parts and materials.

Goals for 1964

Here are some of the product goals for 1964 and their value compared with current production:

Radios: 12.3-million worth \$147-million as compared with

11.9-million sets worth \$143-million this year.

Digital Computers: 430 units worth \$60-million compared with 50 units worth \$7-million.

Computer Devices: \$56-million worth vs. \$280,000.

Other Electronic Devices: \$167-million compared to \$280,000.

Measuring Instruments: \$83-million vs. \$41-million.

Transistors: 314-million in 1964 worth \$113-million com-

pared with 127-million worth \$60-million in 1960.

The Japan Machinery Industry Assn. said that transistor production in the first six months of 1960 was over the 150-million mark.

The five-year program also includes industry manpower expansion. The Japanese hope to have 150,000 engaged in assembly line work and an additional 160,000 doing research and development tasks. This is an increase of some two-and-a-half times the size of 1959 labor forces.

Germany Recruits Irish Workers To Relieve Textile Labor Shortage

Belfast—The growing labor shortage in West Germany was brought into sharp focus with the disclosure that a German textile firm is recruiting linen trade workers here.

Reports state that a 44-hour week is being offered and wages are based on piece work. Six months work qualifies an employee for 18-days paid vacation in 1961.

An industry spokesman here said that the German firm, Biele-

felder Mechanical Weaving Co., has already succeeded in hiring some workers for automatic looms and various spinning machines.

However, he added, the scope for recruitment was comparatively modest in that unemployment among Northern Ireland's textile and hosiery workers is currently about 1,500.

The West German textile industry is reported to have 35,000 vacancies.

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TWA U. S. A. ALL-CARGO SCHEDULE

READ DOWN		DAILY EXCEPT SAT. AND SUN.		READ UP	
599 1049H	595 1049H	FLIGHT NUMBER EQUIPMENT	598 1049H	592 1049H	
11:00	11:25	Lv (EDT) NEW YORK (INT'L.) ... Ar	11:42	12:18	
	12:32	Ar (EDT) PHILADELPHIA ... Lv			
	1:35	Lv (EDT) PHILADELPHIA ... Ar			
		Ar (EDT) PITTSBURGH ... Lv		10:40	
		Lv (EDT) PITTSBURGH ... Ar		9:57	
		Ar (EST) COLUMBUS ... Lv			
		Lv (EST) COLUMBUS ... Ar			
		Ar (CDT) CHICAGO (MIDWAY) ... Lv	7:30		
		Lv (CDT) CHICAGO (MIDWAY) ... Ar	6:48		
1:24	3:14	Ar (CDT) INDIANAPOLIS ... Lv		6:45	
2:30	4:15	Lv (CDT) INDIANAPOLIS ... Ar		5:47	
	5:22	Ar (CDT) ST. LOUIS ... Lv		3:40	
	6:25	Lv (CDT) ST. LOUIS ... Ar		2:41	
	6:36	Ar (CST) KANSAS CITY ... Lv			
	7:40	Lv (CST) KANSAS CITY ... Ar			
7:15		Ar (PDT) LOS ANGELES ... Lv	10:30		
		Lv (PDT) LOS ANGELES ... Ar			
	12:51	Ar (PDT) SAN FRANCISCO ... Lv		8:00	

DARK TYPE (11:00) INDICATES P.M. — LIGHT TYPE (11:00) INDICATES A.M.

Bulging Inventory Prompts Renault To Cut Production

Paris—Renault has cut production of its best-selling model, the Dauphine, from 2,000 to 1,600 units a day and at the same time shaved the work week for half of its employees from 48 to 45 hours.

To Keep Things Under Control

The cutback, announced after the assembly lines were started up last week after the annual August vacation shutdown, was made to keep a burgeoning inventory of unsold cars from getting out of hand, a Renault spokesman indicated.

Exports account for about half of the company's sales and results this year in its biggest overseas market, the United States, have been disappointing, largely because of the advent of the American compacts.

British Car Sales Down, Too

Meanwhile, British officials, while claiming that no particular product is to blame for recent setbacks in the country's export sales, point out that the over-all failure of auto exports to expand, particularly in the U. S., has not helped the situation.

According to Board of Trade estimates, U. K. automobile exports for the three months through July this year were at the same level in value as for the corresponding three months last year.

Auto exports to the U. S., however, were 27% less in value during the past three months than in similar period last year. A spokesman for the main manufacturing firms in the U.K. blamed U. S. compacts for the export setback suffered.

TWA INTERNATIONAL ALL-CARGO SCHEDULE

EASTBOUND		TUE.	THUR.	SAT.	WESTBOUND		TUE.	WED.	SAT.
		980 1049H	980 1049H	970 1049H			971 1049H	981 1049H	981 1049H
NEW YORK	Lv	01 30	01 30	01 30	ROME*	Lv	14 30	16 30	14 30
INTERNATIONAL AIRPORT	Ar	107 25	107 25	107 25	MILAN*	Ar	16 10	18 10	16 10
GANDER	Lv	08 10	08 10	08 10		Lv	17 40	19 40	17 40
	Ar	118 40	118 40	118 40	ZURICH*	Ar	18 45		18 45
SHANNON	Lv	19 25	19 25	19 25		Lv	20 00		20 00
	Ar			22 30	GENEVA*	Ar		20 50	20 50
FRANKFURT	Lv			00 30		Lv		21 50	21 50
	Ar	Tues.	Thurs.		PARIS	Ar		23 10	23 10
PARIS	Lv	21 50	21 50			Lv		00 40	00 40
	Ar	00 15	00 15		FRANKFURT	Ar	21 05		
ZURICH*	Lv	Wed.	Fri.	01 35		Lv	22 30		
	Ar			02 30	SHANNON	Ar	102 00	103 15	103 15
GENEVA*	Lv	01 35	01 35			Lv	02 45	04 00	04 00
	Ar	02 30	02 30		GANDER	Ar	107 35	108 50	108 50
ROME	Lv	04 35	04 35	04 35		Lv	08 15	09 30	09 30
	Ar				NEW YORK	Ar	11 40	12 55	12 55
					INTERNATIONAL AIRPORT				

† Flag stop only.

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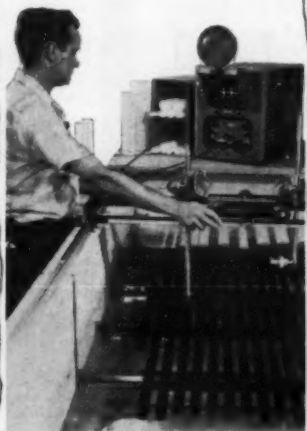
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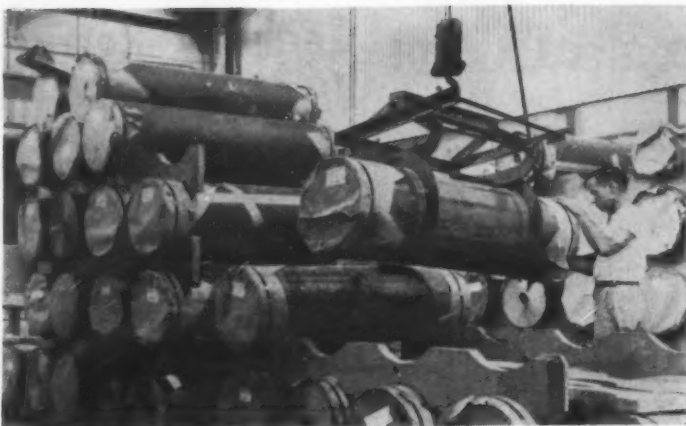
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LUMBER FORMERLY SOLD FOR SCRAP now finds its way into the construction of handy storage racks for paper rolls as result of suggestion.

GE Suggestion Boxes Come Up With Steady Flow of Money-Saving Ideas

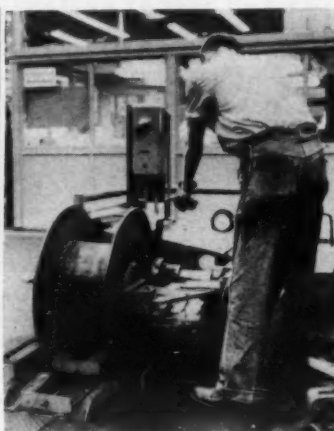
Rome, Ga.—Suggestion boxes at General Electric's Medium Transformer Dept. are producing a healthy flow of sound, money-saving ideas.

One of the latest is a plant-made gadget that straightens large spools in seconds, eliminating production slowdowns from malfunctions due to warped spools.

Before the new straightener was built, GE workmen took spools warped by heat in an annealing oven to another end of the plant, where they tied up a \$75,000 piece of production equipment.

The new unit, a hydraulic cylinder operating against an anvil, is installed in a location convenient to the spool storage area, and does the job in a few seconds. The gadget was built at cost of only \$2,000.

Another money saving idea involves scrap lumber that comes from blocking dunnage, with which incoming copper rod is supported in rail cars. Instead of



PLANT-MADE gadget straightens spools eliminating slowdowns.

selling the lumber for scrap, it is used to fashion handy storage racks for paper rolls. GE workers cut the boards into 2 x 6 sizes and then cut half circles in the wood to cradle the paper rolls. Cost of the racks is the labor used to cut the wood.

Westinghouse Develops Arc Heater With Low Gas Contamination Level

Pittsburgh — Westinghouse Electric Corp. announced development of a new electric arc heater that operates continuously and at a low level of gas contamination.

Dr. John A. Hutcheson, vice president in charge of engineering, said the machine, when fully developed, will be able to supply a stream of gas at temperatures as high as 20,000 F and pressures up to 15,000 psi.

Other Applications Seen

Designed for immediate application in a wind tunnel for missile testing, the heater also holds promise as a chemical synthesizer and as a furnace for processing refractory metals.

A prototype model of the machine has been operated at a power input of 1,700 kilowatts, but a high of 30,000 kilowatts is planned. Temperature into the nozzle has been maintained at 10,000 F, and flow has reached a sonic velocity of 3,400 mph. Velocities over ten times the speed of sound can be expected when gases are expanded with a hypersonic exhaust nozzle, the company said.

The Westinghouse unit has a guaranteed maximum contamination level of 0.2%, compared with as much as 10% for other

systems, according to Dr. Hutcheson. In addition, he pointed out, Westinghouse believes the arc heater "has a uniform temperature 'profile' within the heat chamber."

Electrode Design Is Key

The key to the machine's performance lies in the design of the two electrodes which form the terminals for the arc. Each electrode consists of a hollow donut-shaped ring placed horizontally, one above the other. Water is pumped through the hollow rings for cooling.

An electric arc is started by drawing it across the gap between the two rings and then rotating it at a high rate of speed by setting up a magnetic field around the outside of the heat chamber. The rotation, plus water-cooling, prevents overheating of the electrodes, and thus virtually eliminates contamination from this source.

Westinghouse has completed more than 50 tests on the prototype model and will continue testing until the design limits of the unit have been set. The company expects to market production heaters for use in the metal, chemical, and petroleum industries within one to two years it was reported.

Follow Up: Letters and Comments

Buyers Guide

Orange, N. J.

I was very much interested in seeing your Buyers Guide Section devoted to calculators (PW, Aug. 22, p. 19, "Data You'll Need to Buy Desk Calculators").

It seems like an excellent summary of the most important current models of leading manufacturers and in the tabulation you have included a lot of pertinent information.

We believe the information could also be helpful to many of our men in field sales and are considering the possibility of reproducing and publishing it in some of our sales education material.

May we have your permission to reprint? Of course, there would be customary line crediting PURCHASING WEEK.

E. P. Sickels

Sales Promotion Manager
Monroe Calculating
Machine Co., Inc.
Division of Litton Industries

• You have our permission.

Futures Trading

New York, N. Y.

The article on "futures trading" carried in your Aug. 22 issue was most interesting reading ("Why the Boom in Futures Trading?—It's a Hedge Against Price Zigzags," p. 16).

I would appreciate any reference guides you may be able to recommend, as well as a list, if it is available of the 44 futures markets which are currently in existence in the United States.

May I thank you for a most provocative and informative article.

A. M. Eggeman

Director of Purchases
Witco Chemical Co., Inc.

• For additional literature,
we suggest you write Security
Commodity Exchange

Inc., 81 Broad St., New
York 4, N. Y., and mention
PW's article.

Probe Tester

Nappanee, Ind.

Earlier this year we purchased several of the Sico Electric Probe Testers described in your new products section.

We now want to buy several more but are unable to locate the name of the firm. We know they are in California. Could you give us their address?

Charles Stump

Purchasing Agent
Nappanee Lumber & Mfg. Co.

• The manufacturer is Hahn
Co., 2311 Fox Hills Drive,
Los Angeles 64, Calif.

Still Available

Portland, Ore.

I would appreciate receiving a copy of "Manual of Purchasing Policies and Principles," if it is still available.

Neil B. Lovell

Assistant Purchasing Agent
Omark Industries, Inc.

• We still have copies on
hand. Other readers who
would like copies can ob-
tain them by writing: The
Editor, PURCHASING
WEEK, 330 West 42 St.,
New York 36, N. Y.

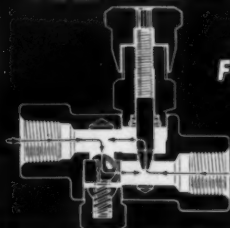
To Our Readers

This is your column. Write on any subject you think will interest purchasing executives. While your letters should be signed, if you prefer we'll publish them anonymously.

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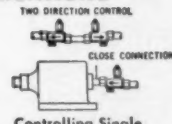
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TYPICAL APPLICATIONS



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Controlling Single Acting Cylinder



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Model KF Knob and Dial Flow Control Valve or Model FN Needle Valve for panel mounting



Model PF Knob and Dial Flow Control Valve or Model PN Needle Valve for panel mounting



Model C Check Valve for in-line mounting

Defense Dept. Shifts to Offense in Buying Battle

Washington—Stung by Congressional charges of wasteful procurement practices, the Defense Dept. is countering with a publicity drive to tell its side of the story of how it does business. A series of reports will be issued once or twice a week discussing various facets of defense supply management.

The Pentagon has been under constant criticism from Democratic controlled Congressional committees and the General Accounting Office on this score, and there's no doubt that procurement officials hope to neutralize whatever harmful effect this running attack may have on Vice Pres. Nixon and the Republican candidates generally when the voters go to the polls in November.

The first report, out last week, tells how the Pentagon screens stocks of material considered excess by one military agency to determine whether the supplies

competition is achieved in negotiated contracting; reduction of military inventories; consolidated procurement and supply management; and what McGuire describes as "other areas of our business in which there are lots of popular misconceptions."

McGuire last week also revealed that he is trying to cut down some of the red tape involving military contracting. His plan is to encourage the military services to minimize paper work in handing down Defense Dept. procurement regulations.

As the rules work now, every time the Defense Dept. issues a new regulation, each service issues one of its own to spell out the new policy as it applies to the individual services. The major contracting agencies of each service then put out their own regulations. Frequently, an individual procurement office of a major agency continues the flow of red tape by issuing its own regulations. McGuire wants to limit the publication of procurement regulations to help simplify policy-making.

IAM Votes \$15-Million Strike Fund To Strengthen Its Bargaining Muscle

St. Louis—The International Association of Machinists plans to set up a \$15-million strike fund in an effort to strengthen its hand in dealing with employers and a declining union membership.

This was one of the programs outlined last week as the 910,000-member organization opened a 10-day convention here. Other objectives included:

- An eight-point bargaining program to deal with "adverse

effects" of automation, which stressed the 30-hour work week.

- Setting up machinery for acquainting members with political issues and candidates in an effort to combat what the union refers to as "the problem of the anti-labor climate."

- Intensifying get-out-the-vote campaign.

- Enlarging the scope and efforts of IAM's political arm, The Machinists Non-Partisan Political League.

Distribution of Reports

Defense Dept. reports will be distributed to members of Congress, their staffs, and the public. To get on the mailing list, write to the Office of the Asst. Secy. of Defense for Supply & Logistics, Rm. 4B734, Pentagon, Washington, D.C. asking for copies of "Information on Defense Supply Management."

can be used elsewhere in government. The goal is to prevent the public sale of surplus supplies other agencies are planning to buy. Congressional critics and the General Accounting Office have long complained that one military agency orders the same sort of material another agency sells as surplus.

Last year, the report says, over \$1.8-billion worth of goods was switched from the inventories of one military agency to another. In addition, more than \$600-million worth of excess military property was doled out to civilian agencies.

The new promotional scheme is the brainchild of Perkins McGuire, Asst. Secy. of Defense for supply and logistics. McGuire's own office, rather than the Pentagon's public relations organization, is running the program.

Says McGuire: "There's been a lot of talk about waste in military procurement. We would be deficient if we did not take our side of the case out into the open. By reporting to the nation on its management methods and results, the Dept. of Defense is confident that the effectiveness and economy of military supply operations will be recognized."

Upcoming reports will deal with such topics as these: How

'Hot' Oil

A microwave heating system now under development could multiply the world's recoverable supply of oil seven times. The microwave generator would be inserted in a well to heat and liquefy the huge amounts of molasses-like petroleum trapped in oil formations, which are not recoverable by ordinary techniques. Once liquefied, the petroleum could be pumped to the surface with the rest of the oil.



Background For Perfection

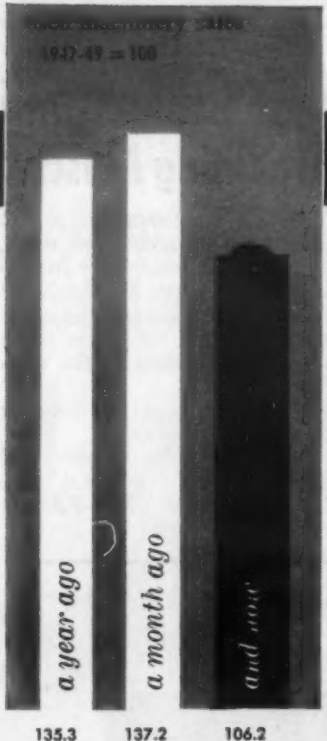
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P/W REPORTS ON RESALE PRICES

Auctions at Minimum

Because of Chicago's big three-ring metalworking circus—the once-in-every-five-years Machine Tool Exposition, the Production Engineering Show (machine tool controls and components), and the International Machinery Show (mostly foreign machines)—industrial auctions have been held to a minimum.

But beginning next month, auction sales will be in full swing across the country, and buying should be stimulated as a result of the shows.

The nation's auctioneers are already making preparations. In the coming months, dozens of major sales are scheduled—most the result of corporate mergers.

Latest Auction Prices

JULY 14

Auction held at Ainsworth Precision Casting Co., Springfield, Tenn. Auctioneer: Samuel L. Winternitz & Co., Chicago.
 (1942) Monarch 18 x 48-in. engine lathe. Good condition. \$4,200.
 (1952) Hendey 12 x 48-in. engine lathe. Good. \$4,800.
 Kearney & Trecker 2D rotary head miller. Good. \$9,000.
 Cincinnati 2L vertical miller. Good. \$3,250.
 Universal 3-in. horizontal boring mill. \$4,250.
 Cincinnati 5-ft, 3-in. superservice radial drill. Good. \$7,000.
 Fosdick 3-ft, 11-in. sensitive radial drill. Good. \$4,200.
 Edlund 4B-12 single-spindle drillpress. Good. \$1,000.
 Edlund 2-15 two-spindle drillpress. Good. \$1,900.
 Fosdick 24-in. single-spindle drillpress. \$1,500.
 Hendey 20-in. shaper. Good. \$2,250.

AUGUST 9

Auction held at Heineke & Co., Springfield, Ill. Auctioneer: Industrial Plants Corp., Chicago.
 Atlas 18 x 38-in. bench lathe. \$200.
 Abrasive M34 surface grinder, vertical, Ser. No. 1001. \$500.
 Cincinnati No. 3 plain milling machine, 16 spindle speeds. \$200.
 Wilson-Rockwell 3GR hardness tester. \$325.
 Niles 18 x 54-in. toolroom lathe, 20-in. swing. \$110.
 Swaine No. 33 open-back inclinable press, Serial 5253. \$225.
 Two Robinson open-back inclinable presses, 85 tons. \$3,250 and \$3,500.
 Swaine No. 37 open-back inclinable press, Serial 5122. \$500.
 Verson No. 7½ open-back inclinable press, 105 tons. \$7,750.

Coming Auctions & Sales

SEPTEMBER 13

Federal Screw Co., Chelsea, Mich.
 Machine tools and metalworking equipment.
WRITE, WIRE, PHONE: Industrial Plants Corp., 316 S. LaSalle St., Chicago.

SEPTEMBER 15

Standard Steel Treating Co., Detroit.
 Heat treating equipment.
WRITE, WIRE, PHONE: Samuel L. Winternitz & Co., First National Bank Bldg., Chicago. State 2-5908.

SEPTEMBER 15

M. W. Kellogg Co., Jersey City, N. J.
 Toolroom and heavy production machinery. Fabricating and welding equipment. Materials handling equipment. 522,500 sq. ft. of industrial plant on 41 acres of land for sale by private negotiation.
WRITE, WIRE, PHONE: Industrial Plants Corp., 90 West Broadway,

New York 7, N. Y. Barclay 7-4184.

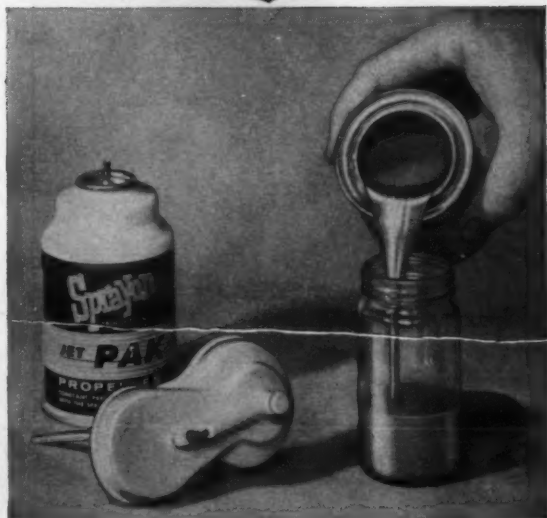
SEPTEMBER 20

Herzberg Corp., Milwaukee.
 Machine tools and metalworking equipment.
WRITE, WIRE, PHONE: Industrial Plants Corp., 316 S. LaSalle St., Chicago, Ill.

SEPTEMBER 20

New York Rubber Co., Beacon, N. Y.
 Heavy rubber manufacturing machinery: mills, calenders, presses and machine tools. 186,000 sq. ft. of real estate for sale at auction.
WRITE, WIRE, PHONE: Industrial Plants Corp., 90 West Broadway, New York 7, N. Y. Barclay 7-4184.

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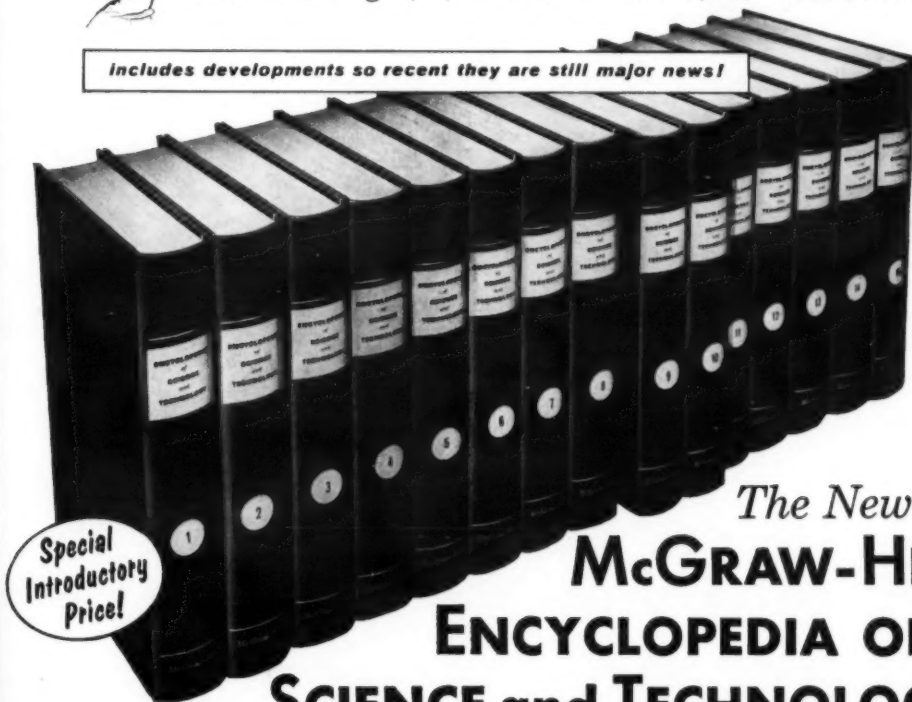
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ASTRONOMY
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NUCLEAR PHYSICS
BIOCHEMISTRY
BIOPHYSICS
CHEMICAL ENGINEERING
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INORGANIC CHEMISTRY
ORGANIC CHEMISTRY
PHYSICAL CHEMISTRY
CIVIL ENGINEERING
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CYTOLOGY
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MATHEMATICS
MECHANICAL POWER
CLASSICAL MECHANICS
METALLURGICAL
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CLIMATOLOGY
MICROBIOLOGY
MEDICAL MICROBIOLOGY
MINERALOGY AND
PETROLOGY
MINING ENGINEERING
NAVAL ARCHITECTURE
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OCEANOGRAPHY
OPTICS
PALEONTOLOGY
ANIMAL PATHOLOGY
PLANT PATHOLOGY
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were written by the very person credited with new discoveries and developments in a given field. Among them are Nobel Prize Winners and others who have distinguished themselves for their original and significant work.

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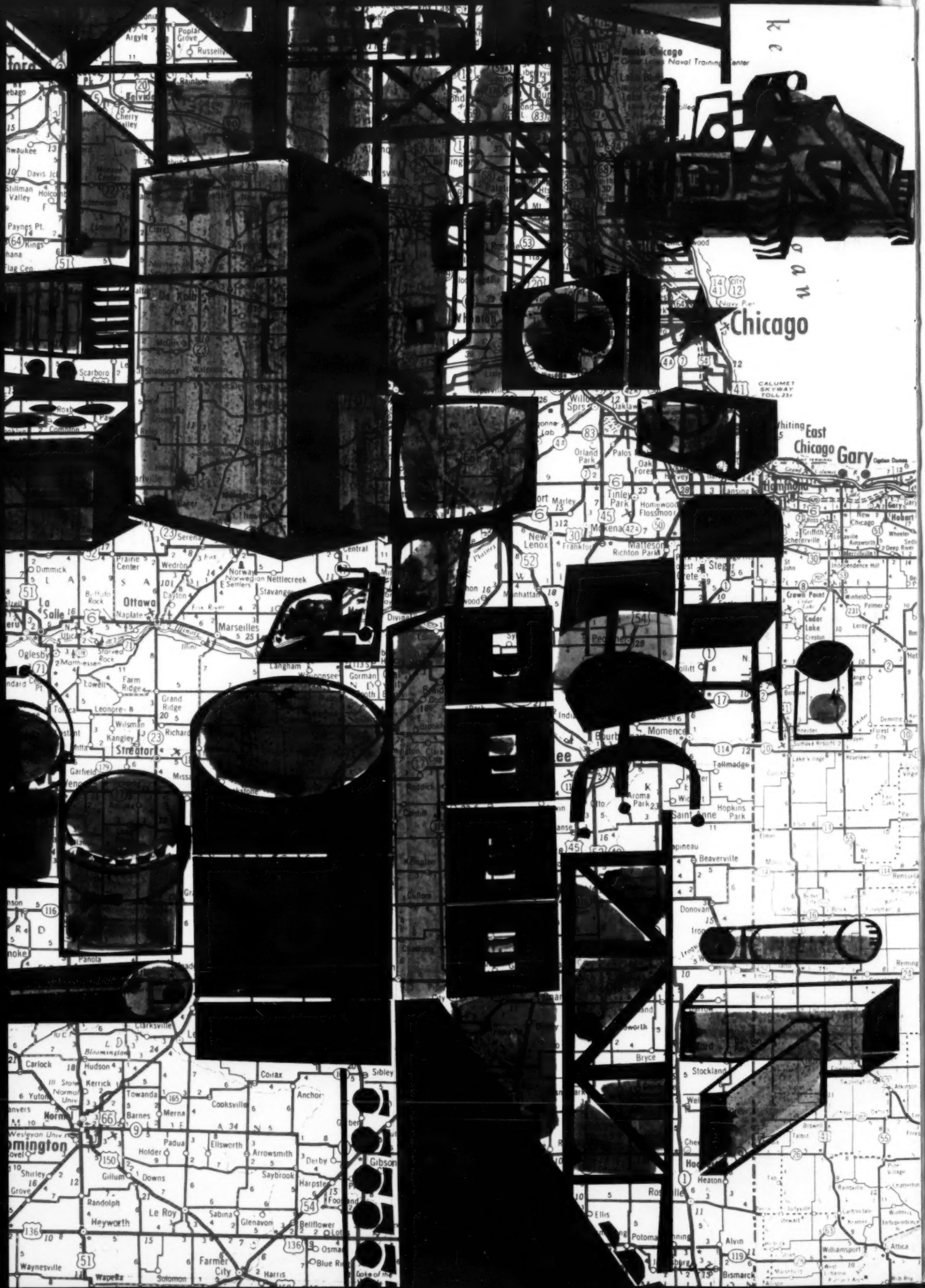
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PWK-9-12



The Case of the Moldy Cheese

HOW WOULD YOU SOLVE IT?

The American Arbitration Assn. Helped Settle This Dispute Over Processed Cheese Packaging

A dairy foods company began having troubles after it started packaging a new line of processed cheese in aluminum foil. The company's purchasing agent had arranged for the delivery of a sample order of the foil which was printed on one side.

At first, it appeared that the aluminum wrapping was perfect. But about two weeks later, the packages began bursting. Laboratory tests disclosed that the aluminum acted upon certain micro-organisms in the cheese, causing them to multiply.

The purchasing agent, his company's quality control supervisor, and a technician from the aluminum company collaborated

on finding a remedy for this defect in the aluminum cheese wrapper.

The first idea tried was to coat the inside of the aluminum with a clear lacquer. A sample order of this, too, seemed to work, but it was discovered that every thousand feet or so, the metal would have some uncoated spots. As it wasn't easily noticeable to the operator of the cheese-wrapping machine, the quality control department was afraid to accept this foil.

The purchasing agent, informed of the facts, continued negotiations for a more fool-proof method.

The next solution was to coat the aluminum foil with a green-tinted lacquer. This would permit the operator to detect uncoated areas and cut the defects out of the rolls.

This seemed an acceptable procedure, except for the possibility

that the dye would come off on the cheese. It was a vegetable dye, harmless and tasteless. Furthermore, it had been approved by the Food and Drug Administration.

But the ultimate consumer wouldn't necessarily know that; a green stain on the cheese would look unappetizing and would make all the company's products suspect.

Final Break

It was not until this "bug" in the third shipment was eliminated that a firm order for a large quantity of aluminum foil could be placed, with a regular schedule of deliveries.

Nevertheless, this difficulty between the dairy firm and the aluminum company was followed by other controversies, and the whole matter was sent before a board of three arbitrators selected from panels of the American Arbitration Assn.

What's Your Answer?

If you sat as a member of the arbitration panel on this case, how would you adjudicate the issues? Was the supplier at fault? Was there an implied warranty beyond the stated guarantee? Was the buyer negligent in use of the equipment?

Make your own decision. Then turn to page 50 and see how expert arbitrators solved "The Case of the Moldy Cheese."

Aluminum Association Points Up Market Growth In New Quarterly Report

New York—The growing markets for aluminum were clearly outlined last week in end-use statistics prepared by the Aluminum Association for the first quarter of 1960.

The building industry led the way as the major aluminum user, taking 18.6% of the total shipments of association members. The transportation field, including mobile homes, ran a close second with 18% of the total.

Durables Third

Shipments to distributors and jobbers were next in line with a share of 14.1%, but these are unassigned as to end-use. Third place position, therefore, for known uses of aluminum fell to consumer durable goods with 12.6% of shipments.

Fourth and fifth spots went to the fields of electrical applications, with 9.6%, and containers and packaging, with 9.5%.

INLAND STEEL IS HERE



Here, in 1893, Inland Steel was born. And here, in the world's number 1 metal-working region, Inland has unceasingly served. Poets have described Chicago and its neighboring industrial cities as a tough-muscled giant—knowing no limit to its creativity. From this area—Inland's "home" territory—girdling Lake Michigan like a crescent from the northern boundary of Illinois up through lower Michigan, come a cornucopia of products—radio and TV sets, home appliances, office furniture and equipment, heavy duty machinery, materials handling equipment, contractor's products, drums, cans, automotive parts, electrical and railroad equipment—almost every product made of steel.

And with the growth of this area, Inland has steadfastly kept pace—is today the only major steel producer headquartered in the area—one of the leading completely integrated steel companies in America—owning its own mines, quarries, ore carrier fleet—its rate of production expansion is greater than the rate of total steel production expansion for the entire nation.

Here, in Chicago, is a shining skyscraper of steel and glass—Inland's home office—hub of an enterprise now reaching out over the midwestern

states from Canada to the Gulf of Mexico. Big, it has grown—big enough to meet every need of the users of steel. Yet the men at Inland, for

Inland is men, are fully aware of the basis of that growth—the warm personal relationships with every Inland

customer. Because Inland is here—has been here for 66 years—Inland knows the area—knows its technical requirements, its manufacturing methods, its people. No "in-and-outers," Inland has tried always to be of service with dependable delivery, metallurgical counsel and quality steels.

Here, also, the aim of Inland men is to be truly a part of the community—buying equipment and supplies within the area—lending a hand where they can in educational and civic enterprises—doing their utmost to provide an ever-growing service to midwestern industry.

INLAND STEEL COMPANY

30 West Monroe Street Chicago 3, Illinois

Sales Offices: Chicago • Davenport • Detroit • Houston • Indianapolis • Kansas City • Milwaukee • New York • St. Louis • St. Paul

Other Members of the Inland Family

Joseph T. Ryerson & Son, Inc.

Inland Steel Products Company

Inland Steel Container Company*

Inland Lime & Stone Company*

*Division



66 years of service to the Industrial Middle West



P/W Goes to the Tool Shows

A roundup of new products from the Machine Tool Exposition, Production Engineering Show, and Coliseum Machinery Show.



Lathe

Has 36 Speeds

Lathe recommended for extra-heavy-duty has 36 spindle speeds from 5 rpm. to 800 rpm., and provides 75 hp. in all speed ranges. Its gearbox has 60 threads and feeds. The lathe is available in swings of 40½ in., 45½ in., and 49 in.

Price: from \$35,000. Delivery: 12 to 14 wk.

Sidney Machine Tool Co., 1940 Carey St., Sidney, O. (PW, 9/12/60)



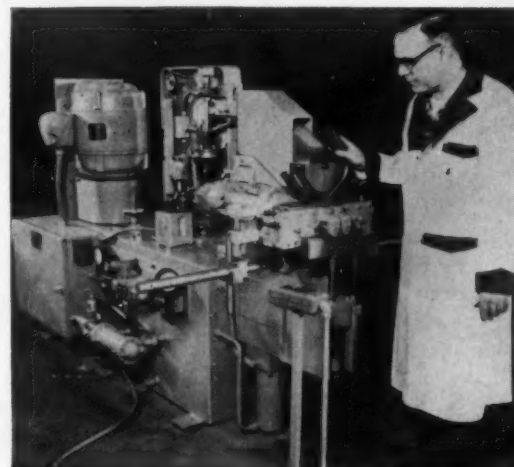
Numerical Control

Handles 3-Axis Machine

Numerical control system directs any 3-axis machine for turning, milling, punching, drilling, slotting, or routing. The system provides absolute point-to-point numerical positioning and speed control. Tape read from console runs system.

Price: \$5,000 to \$6,000 per axis. Delivery: 3 mo.

Minneapolis - Honeywell, Machine Controls Div., 2747 Fourth Ave. S., Minneapolis 8, Minn. (PW, 9/12/60)



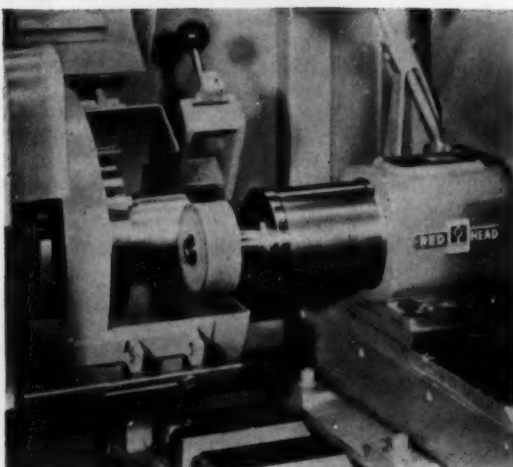
Bending Press

Speeds Production

Bending press for tubular stock work is said to increase production by 25% to 50% by bending 2 tubes per stroke. The device can provide 900 strokes or 1,800 bends per hour. The press is especially recommended for 2-bend parts.

Price: Approx. \$8,600. Delivery: 6 to 8 wk.

Pines Engineering Co., Inc., 650 Walnut St., Aurora, Ill. (PW, 9/12/60)



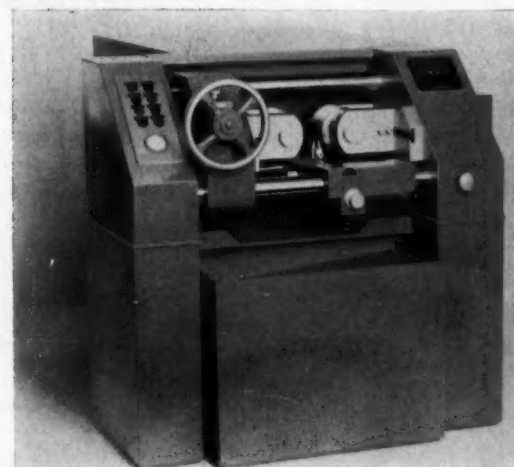
Grinder

Gives High Tolerance

Universal grinder for bore, O.D., and rotary surface work can yield tolerances within 50 millionths in roundness. Standard basic unit has table travel of 20 in., and yields variable speeds of 150 rpm. to 450 rpm. Design allows 3 wheel-head positions.

Price: \$12,500 (plus tooling charges). Delivery: 11 to 12 wk.

Heald Machine Co., 5 New Bond St., Worcester 6, Mass. (PW, 9/12/60)



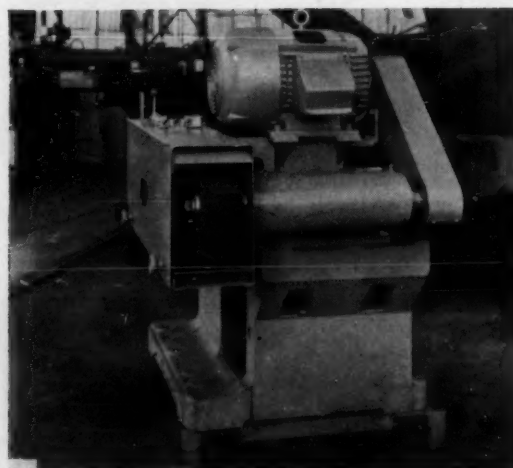
Thread Roller

Takes Big Diameters

Thread rolling machine handles large diameter work and also produces at high speeds on parts 1 in. O.D. and under. In-feed capacity is 5-in. diameter. Design features overload control and a hydraulic servo mechanism controlling die penetration rates.

Price: Approx. \$28,000. Delivery: 6 mo.

Reed Rolled Thread Die Co., 791 Main St., Holden, Mass. (PW, 9/12/60)



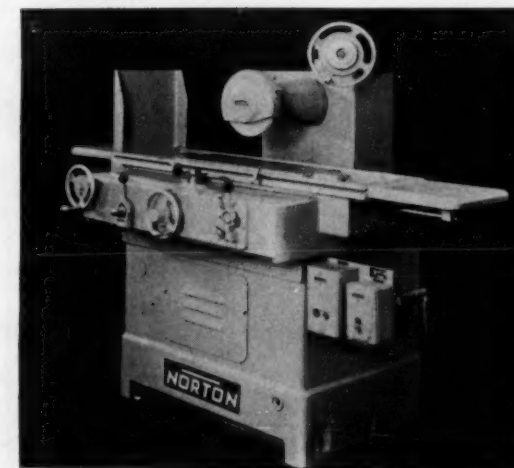
Grinding Attachment

Does Close Work

Grinding attachment mounts on lathes, mills, planers, or other machine tools to perform heavy stock removal or close tolerance micro-inch finishing. Available for right or left hand assembly, the unit uses 12-in. contact wheels and abrasive belts up to 86-in. long.

Price: \$1,975. Delivery: 4 to 6 wk.

Production Machine Co., Wells St., Greenfield, Mass. (PW, 9/12/60)



Surface Grinder

Cuts Heat Damage

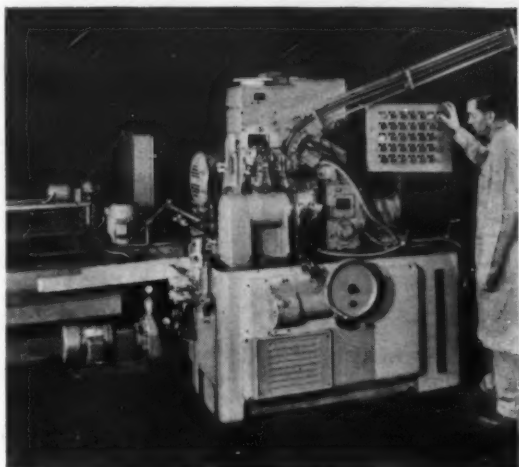
Hydraulic surface grinder provides table speeds ranging from 3 in. per min. to 150 ft. per min. Its higher speeds are said to reduce heat damage to work. Extension spring mounting absorbs pump and motor vibration. Flat ways and guide bar accurately track cross-feed.

Price: \$6,249 (with electrical equipment). Delivery: 6 wk.

Norton Co., 50 New Bond St., Worcester 6, Mass. (PW, 9/12/60)

New Products

Another PURCHASING WEEK service: Price and delivery data with each product description.



Grinder

Forms 2 or 4 Parts

Cylindrical form grinder runs single wheel, or two wheels separated by spacer, to form two or four parts simultaneously. Machine features include automatic part handling, grinding, and wheel dressing and compensation. The unit gives wheel speeds to 9,200 sfpm.

Price: \$65,000 to \$75,000. Delivery: 5 to 6 mo.

Sheffield Corp., Springfield & Thomas Sts., Dayton 1, O. (PW, 9/12/60)



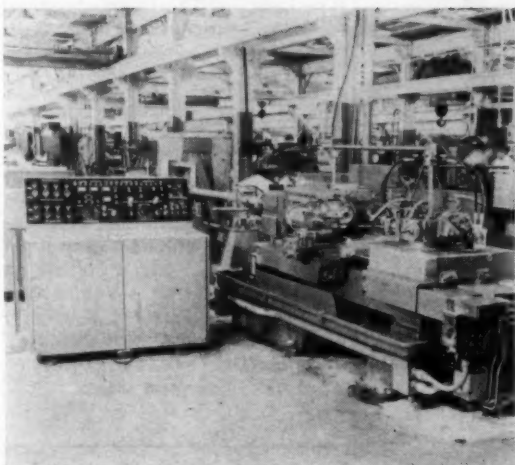
Turret Lathe

Controlled by Tape

Turret lathe has magnetic-tape system which chooses hex or square turret position and controls path and rate of turret and toolpost in straight, taper, or contour turning, boring, and facing. Spindle speeds range from 18 to 1,090 rpm.

Price: approx. \$150,000. Delivery: approx. 6 mo.

Gisholt Machine Co., 1309 E. Washington Ave., Madison 10, Wis. (PW, 9/12/60)



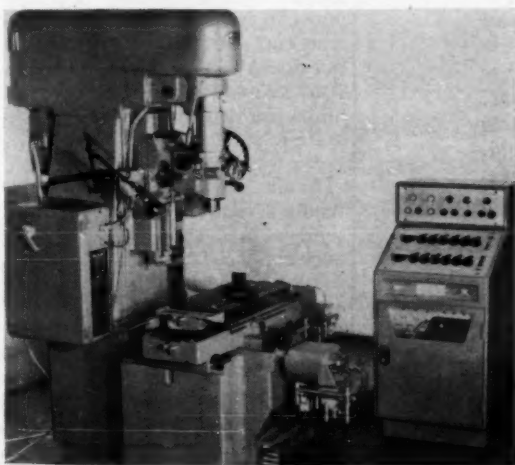
Turret Lathe

Doubles as Bar Machine

Numerically controlled convertible turret lathe can be set up as bar machine or chucker within 15 min. Designed for runs of from 1 to 50 pieces, the machine positions within plus or minus 0.001 in., and repeats to 0.0005 in. Control dials adjust tape input data.

Price: \$87,500. Delivery: 8 mo. to 1 yr.

Jones & Lamson Machine Co., 40 Woolson St., Springfield, Vt. (PW, 9/12/60)



Numerical Control

Runs Machine Tools

Numerical control works from punched paper tape or input dial controls. The unit is recommended for the control of machine tools, including jig borers. Use of the control is said to provide operating and space economies.

Price: approx. \$13,000. Delivery: approx. 3 to 4 mo.

Farrand Controls, Inc., 4401 Bronx Blvd., New York 70, N. Y. (PW, 9/12/60)

This Week's

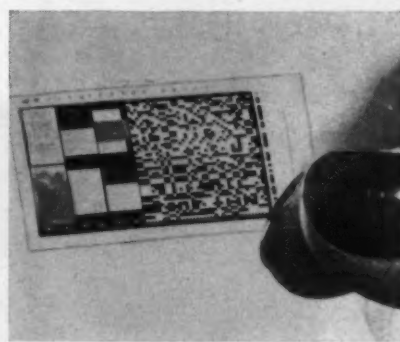
Product Perspective

SEPTEMBER 12-18

• "PHOTOMEMORY" systems probably will have as much effect on industry during the next 10 years as computers did during the last decade. Most companies are still so busy adjusting to the new routines of EDP and punched cards that they haven't had time to pause and wonder what's coming next—but the researchers haven't been idle.

Present punched card equipment has two major drawbacks: (1) cards have a very limited capacity—generally limited to 80 or 90 letters or numbers, and (2) tab cards and computers can't handle written documents such as mortgages, contracts, etc. Photomemory techniques can overcome both limitations.

Most promising development is use of "film chips"—postage-stamp size pieces of photographic film that handle information in much the same way as punched cards. Each film chip can accommodate up to 12 legal-size documents plus a large number of alpha-numeric bits of information.



Photomemory units linked to computers could relieve the great pressure for storage space in the computer's memory. All information could be contained on film chips instead of stored magnetically on tape or a drum. The computer could produce required information by referring to the chips—and could even print out full-size copies of any documents desired.

Where a tabulating card uses punched holes for indexing and searching purposes, the film systems use black and white dots, directly exposed on the film emulsion. Although the film is thirty times smaller than a standard tab card, it has a code capacity five times greater. The black and white dots are used to represent the "yes or no" elements of computer binary code.

• Film chips are stored on a long stick or rod and can be filed or searched electronically at speeds at 1,000-a-minute. They remain in their proper place on the stick during the searching process—eliminating misfiling or possible loss of a tiny chip.

• Recordak Division of Eastman Kodak, Itek Corp., and Magnavox Corp. are actively engaged in developing film systems. Recordak's systems goes under the name of "Minicard." Kodak's first installation was made for the Air Force in the Pentagon during 1958.

• Here's how Minicard handles a typical information retrieval problem:

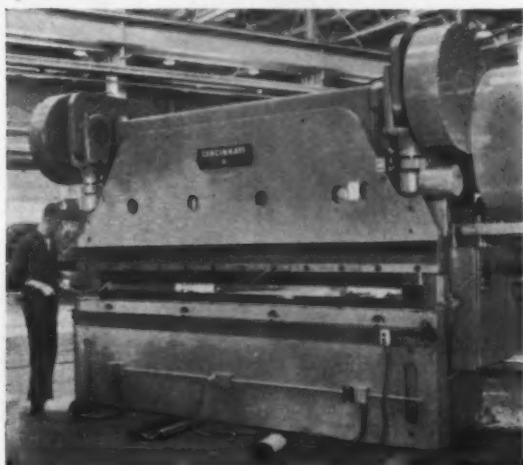
• **FILMING.** Material to be filed is indexed and the indexing data punched on paper tape. The punched tape is fed through a reader which converts the indexing to a dot pattern on the film, at the same time the original document is copied at a 60:1 reduction ratio. Film is exposed in 200 ft. rolls—each containing 2,000 frames.

Exposed film is processed in an automatic, continuous processor operating at 50 frames a minute. Developed film is cut into frames to form individual Minicards at speed of 600 frames a minute. When removed from the cutter, 2,000 film records are locked on a steel handling stick.

• **FILING.** The original negatives are duplicated and the masters placed in a permanent file for safe-keeping. Original documents are destroyed once the master and duplicate copy are made. Duplicates (still on handling sticks) are taken to Minicard sorter which scans the films at 1,000-a-minute rates. Each chip is automatically directed to the storage magazine indicated by indexing code.

Each magazine contains all documents relating to that particular classification. Thus, only one comparatively small section of the file has to be searched in order to locate information on a specific subject. The working file consists of portable aluminum blocks, stored three to a drawer in file cabinets. One file cabinet will hold 900,000 film records—equivalent to 11-million pages of documentary information plus 264-million bits of alpha-numeric information.

• **RETRIEVAL.** Requests for information are coded and punched into paper tape. The magazine containing the desired information is placed in the reader, which scans the films and selects chips needed for the answer. Chosen films are duplicated right in the reader and the originals returned to their proper place. Copies may be viewed in desk reader, or enlarged back to original size at 300 print/hr. speeds. Duplicate negatives are discarded.



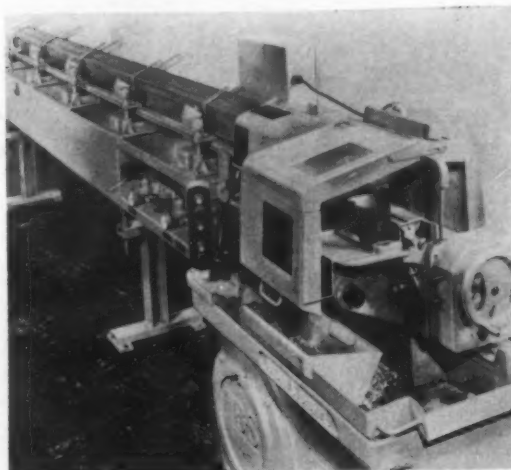
Press

Has 6 Control Positions

Automatic press gives fast cycling without clutch slipping or "whip up". Unit can handle 1/4 in. x 13 ft. mild steel. Its design provides automatic cycle control, fail-safe brakes, and 6 control positions. Transmission yields 7 or 30 strokes per min.

Price: approx. \$20,000. Delivery: 1 to 2 mo.

Cincinnati Shaper Co., Box 111, Cincinnati 11, O. (PW, 9/12/60)



Screw Machine

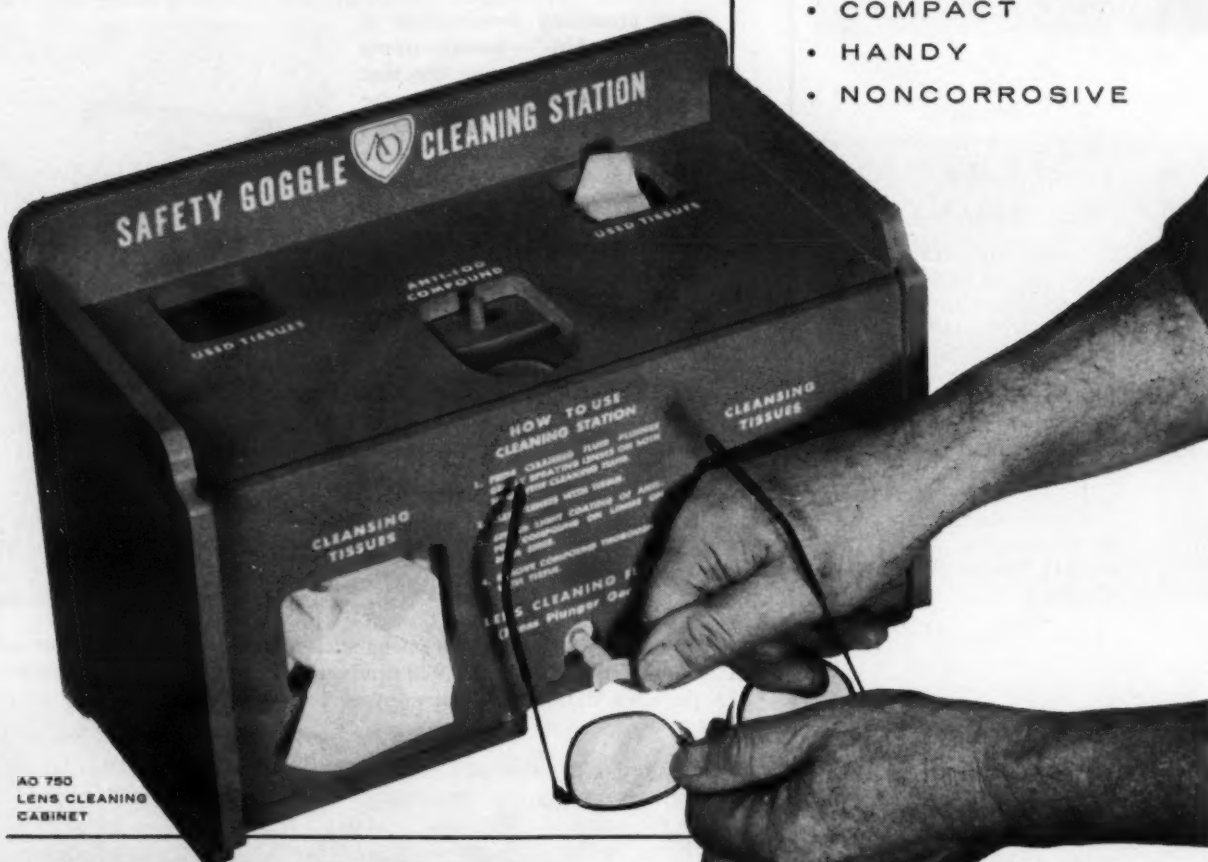
Air Ejects Bar Ends

Automatic screw machine runs at 10,000 rpm spindle speed. Machine has floating spindle liner in bar feed and air-cylinder-run friction brake to prevent stock whip. Turret-fitted unit is non-reversing, and its design provides for air ejection of bar ends.

Price: \$12,380, or approx. \$12,850 (with automatic gager, broken drill detector). Delivery: approx. 6 to 8 wk.

Brown & Sharpe Mfg. Co., 235 Promenade St., Providence, R. I. (PW, 9/12/60)

HELPS EYE PROTECTION PAY OFF!



AO 750 LENS CLEANING CABINET

- SMALL
- COMPACT
- HANDY
- NONCORROSIVE

American Optical
COMPANY
SAFETY PRODUCTS DIVISION
SOUTHBRIDGE, MASSACHUSETTS
Safety Service Centers in Principal Cities

A Complete Cleaning Establishment in a One-Foot* Wooden Chest!

*(12" long, 9" high, 6" deep)

Always insist on AO Trademarked Safety Products

QUICK FACTS

Complete unit consists of:

- (1) No. 750B 6 oz. bottle and sprayer (750S) (standard)
 - (2) No. 750F Lens Cleaning Fluid (upon request)
 - (3) No. 750T 2 Boxes of Cleansing Tissue, each containing 120 sheets (standard)
 - (4) No. 111 One 1-oz. jar of 111 anti-fog paste (standard)
- NOTE: Order combined 350AF Super-Clear cleaner and anti-fog fluid separately. It's superior.



Provides all necessary cleansing and anti-fog materials for glass and plastic safety glasses, goggles and face shields and personal glasses.

WOODEN CONSTRUCTION — it won't corrode. No metal parts, even plunger is plastic. No waste — paper is dispensed one sheet at a time in pop-up fashion and is highest grade wet strength. Disposal compartments prevent litterbugging — keep area neat. Unit attaches to wall at handy plant locations. Instructions on front.

750F Fluid originally recommended for use with this cabinet and still available is primarily a cleaning fluid. For combined cleaning and anti-fogging in one operation, specify our 350AF SUPER CLEAR. Keeps surfaces fog-free longer than any other solution — tests prove it! Just spray on — wipe off.

Be Safe for Sure... with AO SURE-GUARD Products

Product Briefs

Steel shelving features compression shelf clips that allow assembly and disassembly of units without use of tools, nuts, or bolts. The clips fit into slots on the upright supports of the shelving. Four clips support each shelf. The shelving is box-formed from 18-gage steel, and its parts and inserts are interchangeable. Republic Steel Corp., 1038 Belden Ave., N. E., Canton 5, O.

Power-run folding column rolls out to make a rigid column to push or pull heavy loads with steady force. The device is self-contained in a small area. Wayne Iron Works, 147 N. Pembroke Ave., Wayne, Pa.

Hollow-spindle drilling machine drills exotic metals quickly and cleanly. Machine uses timing belt instead of conventional V-belt drive. Buffalo Forge Co., Dept. 51, 490 Broadway, Buffalo, N. Y.

Fluorescent lamp uses new phosphor combination to provide 15% more light than standard 40-watt cool white lamps, and 36% more light than daylight-type lamps. The lamp, designed for high light output at low cost, yields 3,200 lumens. Westinghouse Electric Corp., Lamp Div., Bloomfield, N. J.

Automatic welding system assembles and welds up to 300 sub-miniature electronic components per min. Load stations, continuous dial feed table, welding head and transformer are mounted on a heavy-duty frame. Welder runs on 115 v. or 120 v. Raytheon Co., Commercial Apparatus & Systems Div., 1415 Providence Turnpike, Norwood, Mass.

Where Can I Buy?

Some products are easy to locate, others difficult. Perhaps you can help one of our readers who knows exactly what he wants but doesn't know where to get it. And keep in mind that you can make use of this PURCHASING WEEK service at any time.

While you are answering our reader's request, would you also send us a carbon copy of your answer?

"We are in need of a source of supply information for epoxy molded coils on a rush basis."

G. A. Amidon
Purchasing Agent
Eriez Mfg. Co.
1945 Grove Drive
Erie, Pa.

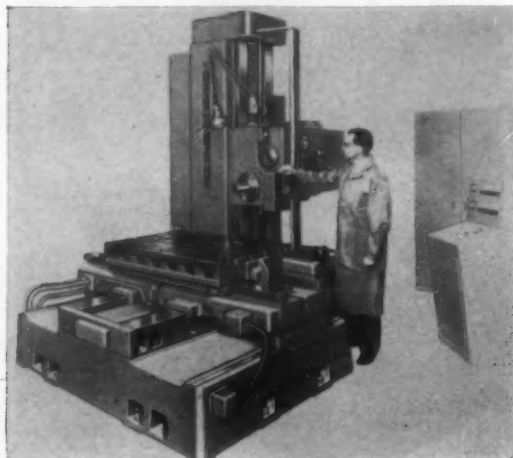


Nothing...but nothing...stops a Rex Man

The motto for the U.S. Postal Service is just the beginning for a Rex Man. Severe climatic conditions...impossible delivery requirements...unusual product application assistance...nothing stops these couriers from the successful completion of their self-appointed responsibility: providing the best in customer service.

Oh, incidentally, he handles only the best: Rex Quality Drive and Conveyor Chains, Sprockets, Flexible Couplings, Belt Idlers, Pulleys...Shafer Roller Bearings. Need his name? Write CHAIN Belt Company, 4702 W. Greenfield Ave., Milwaukee 1, Wis. CHAIN Belt (Canada) Ltd., 1181 Sheppard Ave. East, Toronto.

REX[®]
CHAIN BELT COMPANY



Jig Borer

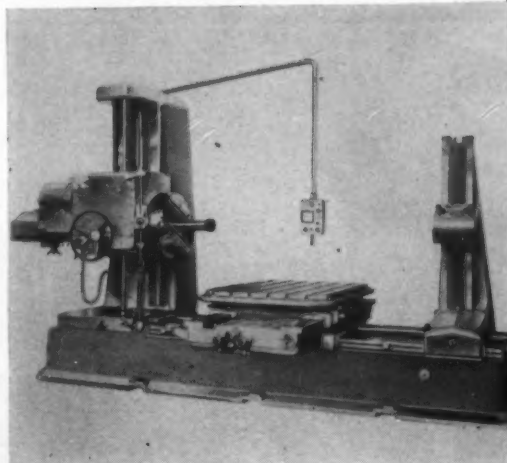
Numerically Controlled

Numerically tape-controlled or standard remote-controlled 3-in. jig boring and milling machine is accurate to 0.0001 in. Unit has feed rates of 0.012 to 120 IPM, and its spindle speeds range from 12.6 to 1,600 RPM. The machine is recommended for toolroom and production work.

Price: approx. \$70,125.

Delivery: Approx. 10 mo.

Giddings & Lewis Machine Tool Co., Fond Du Lac, Wis. (PW, 9/12/60)



Milling Machine

Has Movable Cutterhead

Milling machine has spindle motor drive in its ram for maximum cutting power. Ram is rigid in retracted or extended position. The medium-weight machine has an adjustable cutterhead for horizontal, angular, and vertical milling.

Price: \$7,865 (plain saddle) or \$8,225 (universal saddle). Delivery: 2 to 3 wk.

Van Norman Machine Co., 3600 Main St., Springfield, Mass. (PW, 9/12/60)



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the sling chain with everything

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- maximum safety for overhead lifting
- lighter weight for easier handling
- long life on toughest jobs

FIRST TO BE TESTED, REGISTERED AND GUARANTEED. A Certificate of test including guarantee is issued for each new Herc-Alloy Sling Chain shipped from our factory. A metal registration tag is permanently attached bearing the serial number which is recorded in our engineering files with full details about your chain.

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CHAIN SAFETY PROGRAM literature and assistance available.



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GE Develops Brighter Night-Light Panels

Cleveland—General Electric has developed an electroluminescent light source that it says is five times brighter than any other now commercially available.

First commercial application will be an inexpensive night-light multiple-outlet combination. It will be available on retail counters in October in four colors—green, blue, yellow, and white.

The electroluminescent lamps currently are available in size from 1 sq. in. to 164 sq. in. (11 3/4 x 14 in.). They are flexible plastic encapsulated panels only .030 in. thick or comparable in thickness and flexibility to a heavy magazine cover.

Initial brightness, operating on 60-cycle, 120-volt current, range from 4.5 footlamberts (units of light) for green, 1.5 for yellow and white, to approximately 1 footlambert for blue. "Sample" prices range from 75¢ for 1 in. sq. to \$14 for a 11 3/4 by 14-in. rectangle. Prices for quantity orders are lower and depend upon the sizes and quantities involved.

The first night light employs a green panel held in a white plastic streamlined case. Rated at one-tenth watt, the unit will give a soft glow for less than a penny's worth of electricity a year.

Westinghouse Designs Fan To Cut Installation Space

Boston—Westinghouse has developed a new fan that will cut installation space requirements 50%. The straight-line centrifugal unit has been trademarked the "Centriline."

In-line air flow design eliminates the need for space-consuming entrance and discharge elbows. Westinghouse officials estimate that the raw line will sell for "approximately the same as conventional fans."

The new design also is said to provide high flexibility in installation. Units may be hung from ceilings or may be mounted on a wall or stacked one on top of another. The motor may be mounted on the fan housings or installed separately on an integral vibration base.

Inlet and outlet dimensions on the airfoil-bladed fan have been made the same size to simplify installation. Performance and sound levels closely resemble scroll-shaped centrifugal units with the same wheel diameter.

The "Centriline" fan is available in 6 sizes, with airfoil wheels from 27 in. to 44 1/2 in. in diameter. Fan volumes range from 4,700 cfm to 46,800 cfm, and pressures range up to 9 in. of water static.

Purchasing Week Definition

Numerical Control (Part I)

Numerical control is the command of a process through the direct conversion of symbolic numerical values into actual physical values, such as quantities or dimensions. Here's a list of terms you'll want to be familiar with, to understand numerical control in its many applications:

• **Closed loop.** A group of automatic control units linked in a process to form a continuous chain. In a closed loop, effects of control are measured and corrective steps are taken.

• **Command.** A group of signals or pulses that initiate one step in the execution of a program.

• **Control means.** The part of an

automatic control device that performs a corrective action.

• **Control point.** The actual physical value achieved from a control action.

• **Cycling.** A rhythmical change of the factor under control at or near the desired value.

• **Damping.** The prevention of excessive corrections when a control detects an error or malfunction.

• **Dead time.** Any definite delay between two related actions.

• **Digital computer.** A computer that uses numbers instead of physical quantities to process data. (PW, 9/12/60)

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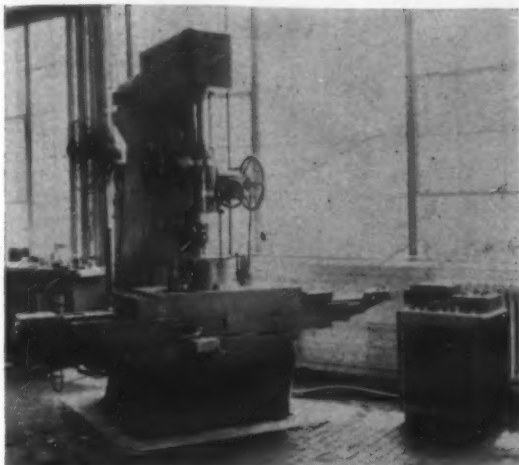
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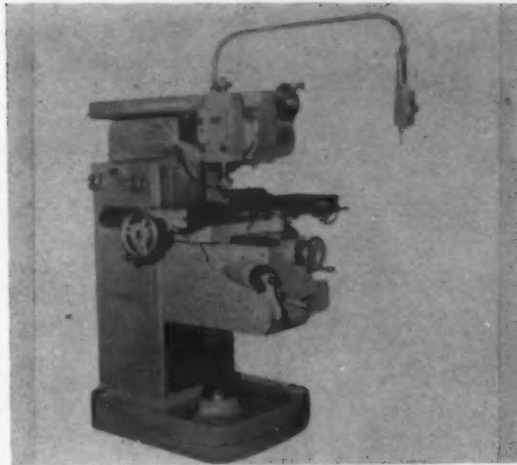
Numerical Control

Cuts Down Time

Numerical control system for presses, lathes, milling machines, jig borers, and other machine tools has separate actuating and measuring systems and a modular design, for less down time. Tape command, decade switch, or punched card fixes analogue signal. Servo loop then establishes machine motion.

Price: under \$10,000. Delivery: under 3 mo.

Diehl Mfg. Co., Somerville, N. J. (PW, 9/12/60)



Boring Machine

Has Air Compressor

Horizontal boring, milling, drilling, and turning machine has air compressor which eliminates metal-to-metal contact and provides smooth traverse motion and reduced wear. Design features complete pendant controls and hydraulic clamping of head, table, and outboard.

Price: from \$13,613. Delivery: immediate.

S & S Machinery Co., 140 53rd St., Brooklyn 32, N. Y. (PW, 9/12/60)

Product Briefs

Medium-capacity glassware washer for smaller laboratories has four stainless steel baskets which hold a variety of labware. Unit has a selector switch for electrical control of complete washing operation. Both steam-heated and electrically heated models are available. Fisher Scientific Co., 389 Fisher Bldg., Pittsburgh.

Light bank for standard relay rack mounting provides visual decimal display in projection-type one-plane presentation. The device, which installs readily into a data system, is available in models of two to eight digits. It runs at ambient temperatures ranging from -50 C to +70 C. Datex Corp., 1307 S. Myrtle Ave., Monrovia, Calif.

Automatic sorting conveyor for use with electronic computer can sort packages into orders at a rate of one per sec. or faster. The conveyor is recommended for parts warehouses and manufacturing assembly systems. Device is said to reduce labor costs and order-processing time by 90%. Speaker Sortation Systems, Inc., 4535 N. 128 St., Butler, Wis.

Transistor-regulated sine-wave power supply uses simplified proprietary circuit to avoid damage by overload, short circuit, or open-circuit operation. Unit produces nominal output voltage of 117 and 1,000 v.-amp. power on an input voltage of 105 to 125 v. dc. Power Sources, Inc., Burlington, Mass.

Vertical color camera is recommended for controlled transparency color separation, offset printing, and photo engraving. Registry bars and pins in carrier and vacuum panel allow the operator to choose any popular separation method, including silver masking. Durst (USA), Inc., 1140 Broadway, New York, N. Y.

Liquid propellant gas cartridge of flashlight-battery size produces high pneumatic pressures in a fraction of a second. The device adapts to run a variety of pneumatic power-actuated devices, and is said to yield clean burning at low flame temperature. Olin Mathieson Chemical Corp., 460 Park Ave., New York 22, N. Y.

Marginal relay resistant to 50 g shock withstands vibration up to 500 cps at 10 g. Device features high resistance coil for plate circuit use. Standard contact rating is 2 amp. at 29 v. dc, or 1 amp. at 115 v. ac. Low-level contacts are also available. Allied Control Co., Inc., 2 East End Ave., New York 21, N. Y.

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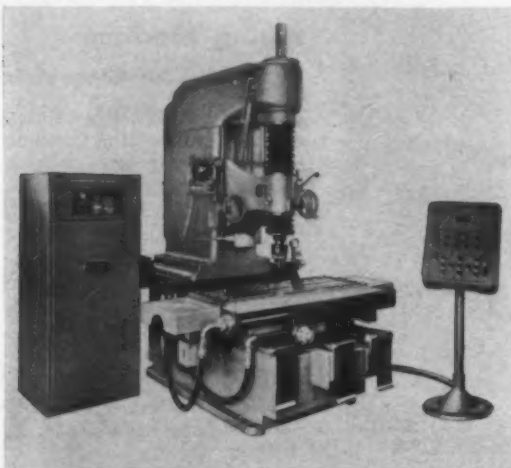
Date Time.....

Name Title.....

Company

Address

City..... Zone.... State.....



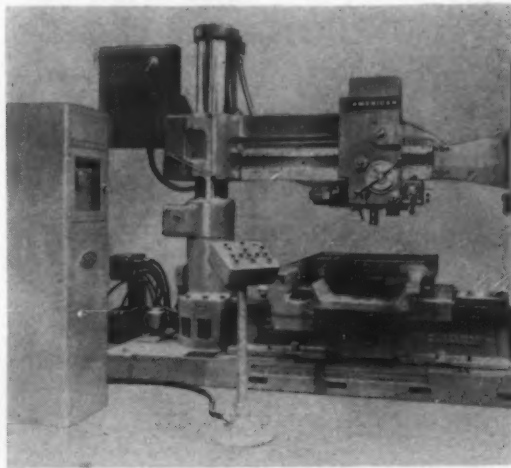
Jig Borer

Positions Precisely

Jig borer has linear transducers to position material precisely. Unit provides accuracy to tenths. Hydraulic circuits give automatic clamping, without distortion. Equipped for both tape and manual dial input, the unit has a vertical capacity of 27½ in.

Price: approx. \$44,700. Delivery: approx. 2 to 3 mo.

W. B. Knight Machinery Co., 3920 W. Pine Blvd., St. Louis 8, Mo. (PW, 9/12/60)



Radial Drill

Works Automatically

Tape-controlled, 11-in.-column radial drill offers depth control of machine spindle from starting point to preselected goal to starting point. After manual setting of dials, controls on the unit work automatically. Device comes with special positioning table.

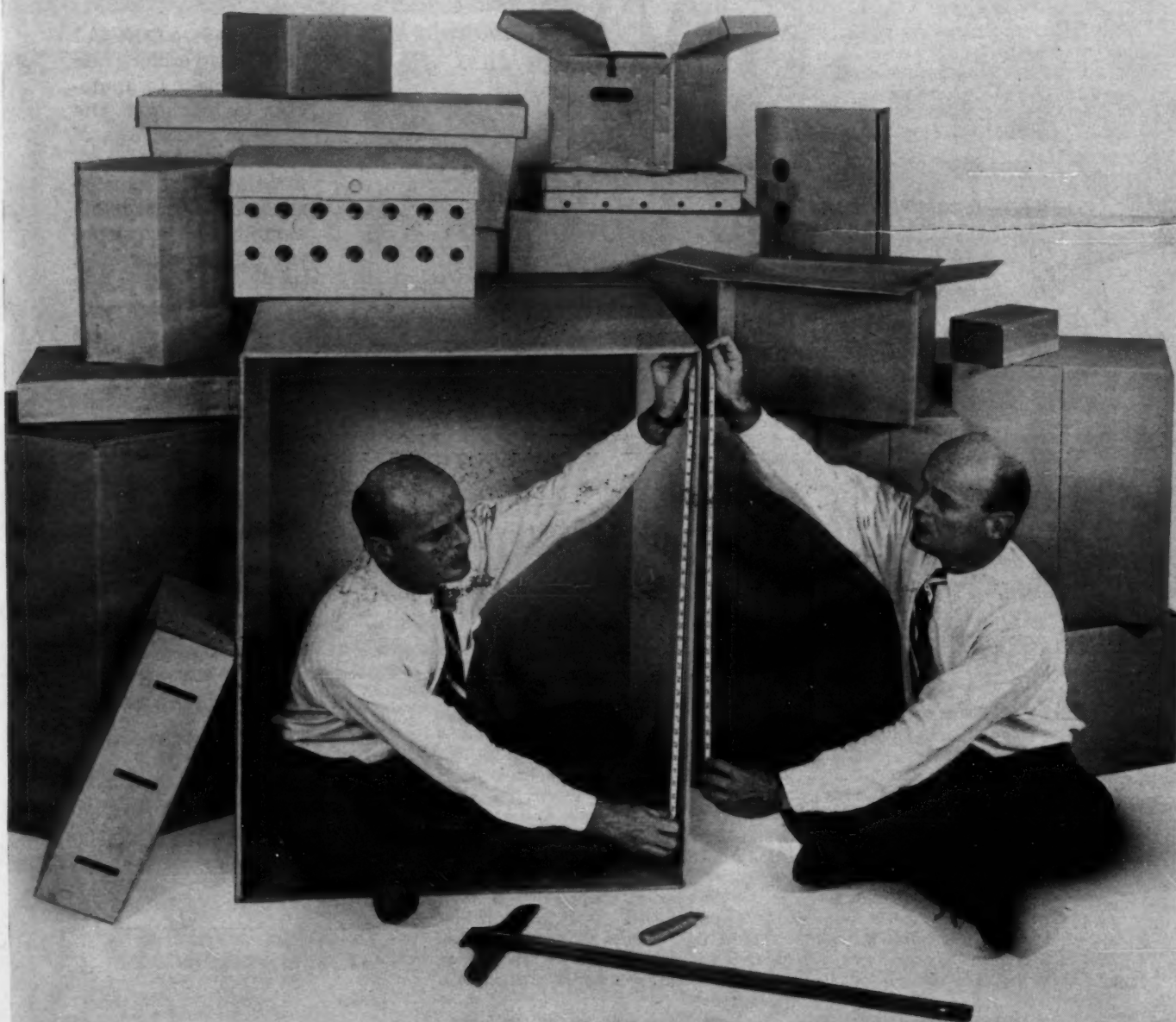
Price: approx. \$55,000. Delivery: approx. 10 wk.

American Tool Works Co., Pearl St. at Eggleston Ave., Cincinnati 2, Ohio. (PW, 9/12/60)

GAYLORD SOLVES PACKAGING PROBLEMS INSIDE AND OUT

Your Gaylord Man isn't twins, he just works like it. He knows the "inside" of container manufacture and the "outside" of packaging operations, so he can give you double-duty service.

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Profitable Reading For P.A.'s

New Books

The Great Organizers, by Ernest Dale. Published by McGraw-Hill Publishing Co., 330 West 42nd St., New York 36, N. Y., 277 pages. Price: \$5.95.

This book provides new insight into high-level management by showing how outstanding leaders solved the organizational problems of such giant firms as Du Pont, General Motors, Westinghouse, and National Steel. Author Dale comprehensively discusses subjects such as the foundations of organization theory, changes in employment patterns, centralization versus decentralization, to whom is management accountable, and more.

J. K. Lasser's Business Management Handbook. Edited by Sydney Preau. Published by McGraw-Hill Publishing Co., 330 West 42nd St., New York 36, N. Y., 858 pages. Price: \$12.50.

Twenty-one prominent executives, each treating his own specialized area, discuss important phases of modern business management.

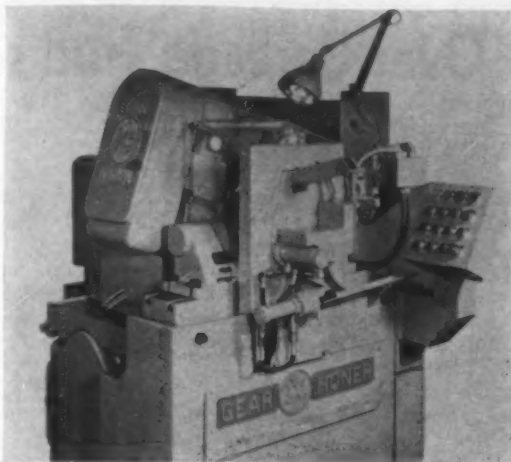
Fresh working information is provided on how to find the right market for any product, how to reduce turnover among employees, how to cut paper work in half, how to develop and maintain good public relations, plus basic pointers to follow in setting up, controlling, and projecting business plans and operations.

As a business guide, it provides answers to many questions covering every phase of modern business organization, operation and management.

From the Manufacturer

Numerically Controlled Tools

Gives information on Ex-Cell-O numerically controlled machine tools for cams, profiling, and contouring. Contains specifications, illustrations, and descriptions of each process. (12 pages). Ex-Cell-O Corp., 1200 Eakman Blvd., Detroit 32, Mich.

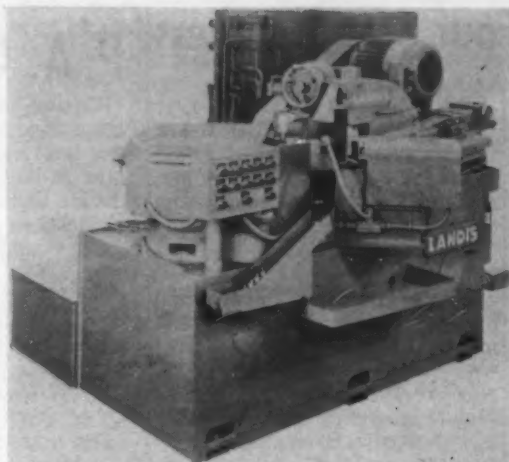


Gear-Tooth Honer Loads Automatically

Gear-tooth honer automatically loads small helical pinions. Unit handles gears from 4 to 20 DP in sizes from 1 in. to 12 in. Its cutter head stroke is 5½ in. maximum. The machine performs locked backlash honing, zero-backlash honing, or constant pressure honing.

Price: approx. \$21,500. Delivery: 22 to 24 wk.

National Broach & Machine Co., 5600 St. Jean Ave., Detroit 13, Mich. (PW, 9/12/60)



Chucking Grinder Sets up Quickly

Chucking grinder grinds chuckable workpieces (including bevel gears) on hub diameter and back gear-tooth face, after short setup operation. Design of the unit features flat ways, V-ways, rapid feed, slow grinding feed, and sparkout.

Price: \$35,000 to \$40,000. Delivery: 4 to 5 mo.

Landis Tool Co., 20 E. 6th St., Waynesboro, Pa. (PW, 9/12/60)

From the Manufacturer

Lighting—Air-Control Units

Discusses company's Lumi-Flo units which provide light, cool air and warm air from the same concealed ceiling fixtures. Includes detailed illustrations and specifications, plus information on the company's research and engineering laboratories. Bulletin B (43 pages). Advertising Dept., Benjamin Div., Thomas Industries, Inc., 207 East Broadway, Louisville, Ky.

Machine Tools

Describes company's line of engine lathes, toolroom lathes, milling machines, shapers, drill presses, pedestal grinders, etc. Contains nearly 500 illustrations, plus specifications, prices and selection data. Also discusses tools, attachments and accessories for use with the various machines. Catalog 1960 (96 pages). South Bend Lathe, Inc., South Bend 22, Ind.

Speed Controller

Describes GE's Thymotrol speed variator for machine feed and spindle application, conveyor systems, textile machines, processing equipment, and other applications for precise speed control. Bulletin GEA-7019 (8 pages). General Electric Co., Schenectady 5, N. Y.

Washable Tracing Film

Describes company's process of restoring printability of original tracings with soap and water. Included is a sample of this drafting film plus a pencil which puts down a waterproof plastic line. Herculene, Deuffel & Esser Co., Third & Adams Sts., Hoboken, N. J.

Aids to Purchasing

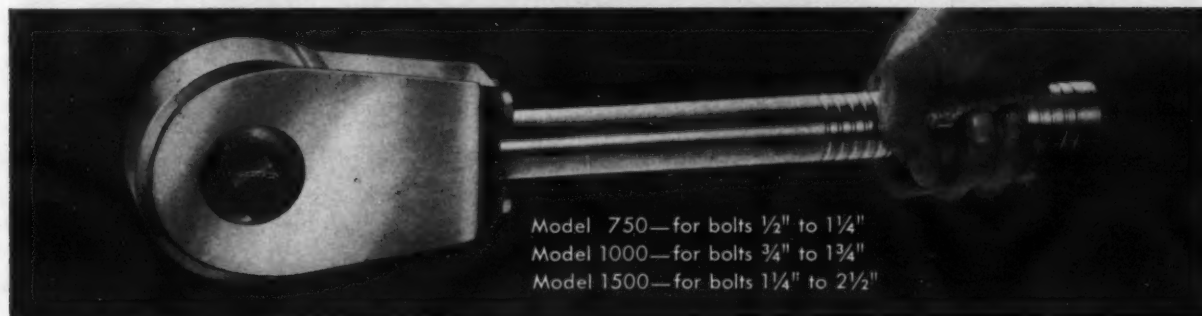
Directory of U. S. Importers/Exporters

Revised trade directory covers more than 1,000 different products and lists over 25,000 U. S. firms engaged in exporting and importing. All products are alphabetically indexed in English, Spanish, French, and German. The price of this 500-page publication is \$15 and it is available from the American Register of Exporters & Importers, 90 West Broadway, New York 7, N. Y.

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first manual impact wrench that works...
LOOSENS THE TOUGH NUTS
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Model 750—for bolts ½" to 1¼"
Model 1000—for bolts ¾" to 1¾"
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There's never been anything like Swench before. It is an entirely new concept in wrench design. Swench is the world's *only manual impact wrench*. Here's what Swench means to you...

NEW SPEED—Nuts that previously had to be burned off can now be "Swenched off"—with unbelievable ease—by one man—in a matter of minutes.

NEW EASE—Only Swench in its torque class is truly portable... lets you take the wrench to the job—anywhere—with no auxiliary equipment, no power connections.

NEW SAFETY—With Swench there's no back-breaking, knuckle-knocking struggle... no dangerous handle extensions



See for yourself! Swench is so different from anything you've experienced, you'll have to see it in action to believe it. For a quick and convincing demonstration, contact Marquette.

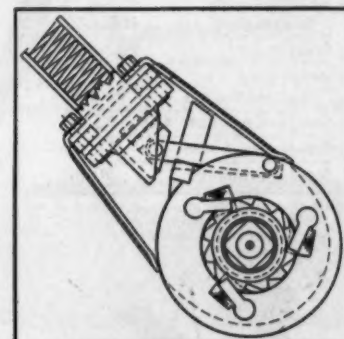
... no sudden release of a frozen nut... no shock transmitted through the handle.

NEW POWER—Swench, size for size, gives greater—and more effective—torque than power wrenches... multiplies torque applied to handle over 1500% (yet all Swench's power is built into the wrench itself).

NEW ECONOMY—Swench saves in many ways... no auxiliary equipment to maintain and man, no costly upkeep on the wrench, no man-hours fighting frozen nuts—and Swench costs less than half as much as wrenches with comparable impact power.

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INSIDE STORY—How is all this possible? Unlike power wrenches that deliver many tap-like blows, or ordinary manual wrenches that apply steady torque, Swench builds up power in its super-strong spring for a mighty wallop that is released as torsional impact every time the handle is advanced slightly more than 30 degrees.

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New York Snubs Four Salt Suppliers

New York—New York City's purchasing department has dropped the names of four companies from a list of suppliers normally invited to submit bids on the city's 80,000-ton/year rock salt contract.

Accused by State

The four firms, Bulk Carriers Corp., Rex Merchandising Co., Progress Merchandising Co., and Domex Corp., have been accused of collusive bidding practices by the State Investigation Commission, whose charges led to City Purchase Commissioner Joseph

V. Spagna's resignation Aug. 18.

While the city cannot legally "blacklist" the four companies from bidding, Abram Mattes, first deputy purchase commissioner, explained, any bids submitted by these firms could be disqualified by a special "board of responsibility."

Mattes' disclosure followed the first appearances of city advertisements asking for rock salt bids, which will be opened on Sept. 19. New York uses the rock salt for snow removal and generally awards contracts from Oct. 1 to June 30.

P.A. Gets Into Rhubarb Over Garbage Trucks

Winston-Salem, N.C.—City Purchasing Agent Aaron Shepherd has reissued bids for two 3-ton garbage trucks—following a hassle with two aldermen over specifications drawn by his department and public works officials.

The aldermen claimed the original specifications were too rigid and should be redrawn to allow the city to take advantage of a low bid that promised savings of about \$900 per truck.

The original specs had called for vehicles with a gross weight of

22,000 lb. Shepherd recommended that the contract go to General Motors Corp., which had bid \$7,508, instead of to International, which had bid about \$900 less for a truck with a gross weight of only 21,000 lb.

The aldermen thought the International bid should have been accepted, because although the rating was cut by only 1,000 lb. the savings would more than balance the decrease in load.

Shepherd in turn, argued that manufacturers of the garbage units recommended that trucks

on which they are used have a minimum gross weight of 22,000 lb.

Public works officials noted that in the past the city had made mistakes by buying too small equipment.

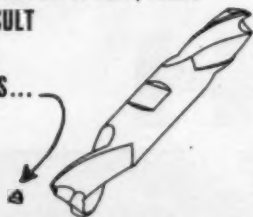
International, in the past, has made bids on larger trucks having the 22,000 lb. spec. It was reported that the firm bid a smaller truck this time to meet competition.

Some city officials felt that the action by the two aldermen meant that one truck manufacturer in effect was dictating what size truck the city should buy.

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END MILL TIPS YOU CAN USE

IMPROPER SPEEDS, FEEDS
RESULT
IN
THIS...

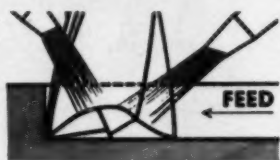


Improper speeds or feeds as well as a failure to use adequate cooling methods lead to rapid, excessive wear on end mills. If end mill users would observe good cutting tool practices on these problems they could cut their tool costs and obtain better overall performance. Follow chart below.

SPEED AND FEED CHART (SFM)

Material	Speed
Aluminum and Magnesium	400-600
Brass	200-500
Iron—Cast and Malleable	90-100
Steel—Cast, Soft Alloy	70-80
Steel—Hard Alloy	30-50
Steel—Stainless	50-80

Feeds vary with diameter . . . from .0002" to .0005" small sizes to .003" up in larger sizes—per RPM.



CUTTING FLUIDS

You will get a better finish to your work and far more mileage from End Mills if you achieve the best possible use of coolants. No brief statement can cover all situations, but best general advice is to use multiple streams—one on leading side of tool—one on back. Keep the flow heavy and steady.

GOT A PROBLEM?

Arrange a consultation with a Chicago-Latrobe Service Engineer. His experience can lead to a quick solution of your problem. Also—request comprehensive End Mill Speed and Feed Chart.

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Los Angeles Hunts P.A. For Educational System

Los Angeles — The Los Angeles city school system has started a country-wide search for a new purchasing agent. The present purchasing director for the Los Angeles schools, Douglas Boone, is retiring soon from the job which rates a salary of up to \$18,000 a year.

Los Angeles school officials will review the records of applicants during September, paying particular attention to P. A.'s with outstanding administrative records in purchasing.

Candidates for the job of handling the city's \$25-million school purchasing program must have academic training that includes at least one college degree, with graduate-level training in administration "highly desirable."

Arbitration Decision

About six months before the aluminum controversy arose in "The Case of the Moldy Cheese" (p. 41), the purchasing agent for the dairy company established procedures for the exchange of information with other department heads.

At the time some of his colleagues thought he was interfering too much in matters that didn't concern him. But it was the P. A.'s ability to document all his company's complaints, with correspondence and memos of telephone conversations, that had much to do with the ultimate decision of the arbitrators.

As a result of their decision, the dairy company was able to terminate its sales contract with the aluminum supplier and contract for similar wrappings from another company, one that was able to deliver a product of uniform quality.

The American Arbitration Assn. is a private, nonprofit organization that helps businessmen and management and labor find peaceful, fair-minded solutions to their quarrels. Many contracts between buyers and vendors contain a "future dispute arbitration clause" directing that any controversy or claim be settled in accordance with AAA rules.

Services of the Association in adjudicating disputes are available in key business and industrial centers across the country. For further information contact the AAA at its main headquarters, 477 Madison Ave., New York 22, N. Y.

Pennsy Strike Jams Other Transport Facilities

(Continued from page 1)
the higher transportation bill in many cases.

A large East Coast chemical firm said it was costing 10% to 15% more to ship its products by truck. A spokesman for Koppers Co., Pittsburgh, said it was costing the firm much more to move products from two of its wood-preserving plants by truck than it would by rail.

The strike erupted when 20,000 members of the Transport Workers Union walked off their maintenance jobs in a contract dispute over work rules and the issue of railroad leasing equipment and contracting with outside firms for maintenance and repair work.

Pennsy officials continued to meet with TWU President, Michael J. Quill late last week in an effort to settle the system-wide tieup.

Could Have Hurt More

Purchasing and traffic people queried by PURCHASING WEEK agreed, almost to a man, that if business were booming, the impact of the strike would be near-disastrous. As it was, plants in many areas found the going tough. For example:

Some 2,000 workers at Chrysler Corp.'s Twinsburg, Ohio stamping plant were laid off the first day of the Pennsy walkout. Chrysler finally arranged for alternate shipping facilities and resumed near-normal production on Sept. 6.

A spokesman at Philco Corp. here declared that a strike of more than a week's duration could force the company to shut 12 plants producing electronic components, cathode-ray tubes, air conditioners, radios, infrared devices, and other items.

"The major portion of components for our electronic plants in the Philadelphia area are brought in by railroad," he said. "Because of the nature of our operations, we normally maintain a close inventory of parts. As a result, we have limited stocks of components to keep our plants running despite emergency steps we have taken recently."

Suppliers Working Overtime

Suppliers worked overtime to keep orders moving out to customers. The big rubber companies in Akron, such as Firestone and Goodyear, said their alternate shipping sources were holding up. Westinghouse Electric Corp., Pittsburgh, reported "no immediate effects." It was using trucks particularly to transport goods to other railroads.

And Alcoa, Pittsburgh, also reported few delays, mainly because "business is relatively slow."

The PW survey showed, however, that were the strike to continue for another few weeks or even less, the additional burden on truckers—despite their excess capacity—would put a severe strain on deliveries.

Strain Begins to Show

This was already showing up in some sectors last week. In Cincinnati, for example, an executive with Al Spade & Sons, a large trucking firm, told PURCHASING WEEK:

"We're going nuts trying to move stuff back and forth between plants and rail sidings. We have about 15 extra units going full blast on two nine-hour shifts a day. They're enough now but I don't know how long they will be."

"No one is going to feel the real impact of this for a few weeks," he added, "until the inbound movement slows down. Then somebody is going to get hurt."

A spokesman for Spector-Midstates, big Chicago trucker, agreed. "We're doing our level best to provide all the trucks needed," he said, "but it's going to be a problem."

Different Story for R.R.'s

It was somewhat a different story for railroads, however. A freight traffic executive for the Erie, for example, reported "no delays" and expected things would continue that way.

"We have the equipment to double our normal traffic," he said, "since our regular business had fallen off substantially before the strike."

Similar comments came from the Baltimore & Ohio, the Reading, and the Lehigh Valley as well as other rail lines that serve Pennsy points.

The survey also disclosed that there were few major problems involved with incoming shipments of raw materials. These were arriving via water to steel mills, via pipelines to petroleum refineries, and via truck and alternate rail routes to thousands of other industrial and commercial firms.

But problems were cropping up in getting finished or semi-finished items to customers—even in the major transportation hub of St. Louis with its many barge lines, 137 truck lines, and 20 on-line railroads.

"My shipments may not move so fast if competition for other

transportation facilities get tight," said the traffic manager for a large motors manufacturer in St. Louis, "but we'll get our products to their destination one way or another."

Detroit automakers faced a double problem with the Grand Truck Western Railroad, which runs between Chicago and Detroit, also shutdown by a strike.

The Chevrolet V-8 engine plant in Flint, Mich. was forced to stop production Sept. 1 after only one day's production of 1961 models. It resumed production last week, however, after alternate transport sources had been located.

Meanwhile, purchasing and traffic people who had been dependent on the Pennsy for shipments continued to work overtime at arranging with truck, rail, and air carriers to keep goods moving and plants operating.

Antitrust Chief Urges An End to Identical Bids

(Continued from page 1)

Justice Dept.'s antitrust division, told the annual convention of the Association of State Purchasing Officials here that buyers should keep a close look-out for identical bids and coordinate action against bid-rigging with the federal government.

He explained that the Justice Dept. has taken steps to improve its means of tracking down same-price bids on government contracts by tightening the system of reporting what appear to be rigged bids on federal contracts.

He said antitrust charges of rigged prices on polio vaccine (which ultimately failed in the courts), charges against three Omaha dairies, claims against makers of mild tranquilizers, and the "most significant" electrical equipment cases—all arose from this improved bid reporting system within the many government agencies.

Bicks indicated that the federal government may file damage suits against the heavy electrical equipment manufacturers who currently face antitrust bid-rigging charges. "It is contemplated, for example," he said, "that suits will be filed in several of the electrical cases where the volume of government purchases was large."

Under a 1955 amendment to the Clayton Act, the government can sue for such damages if there is a possibility it paid artificially high prices for equipment as a result of alleged identical bidding by manufacturers.

This Week's

Purchasing Perspective

SEPT. 12-18

(Continued from page 1)

would enable the association to schedule more sessions on more specific purchasing subjects such as performance measurement, value analysis, contract negotiation, cost reduction, and similar topics.

Among the firms represented in the task force session next week will be the Rock Island Railroad, A. O. Smith, Alcoa, Minneapolis-Honeywell, Worthington, RCA, ACF Industries, Union Carbide, Westinghouse Electric, IBM, Detroit Edison, and Rheem Mfg. A follow-up session of the same group is scheduled for next April—at which time AMA officials presumably will know just how far they need to expand their already heavy emphasis on purchasing management activities.

• • •

MANPOWER NEEDS—How many men does it take to operate a purchasing department? There's no pat answer to that oft-repeated query, but an indicator may be shaping up in the data being compiled in a manpower distribution research project being conducted by 88 industrial firms.

These companies—with AMA aid—have been taking a long, hard look at their personnel distribution for more than a year. Interesting comparisons have been made, and some of the participating firms have developed effective yardsticks to help determine not only who does what but how company staffing compares with other organizations of similar size and industry.

Full details on the findings have been held confidential by the participating firms, but it is understood that purchasing is coming in for considerable attention.

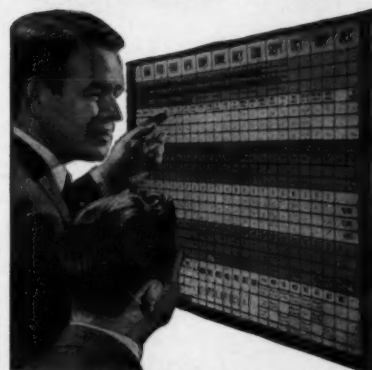
For instance, in studying employee work force percentages in the general administering function, it was found that 10.6% of the 1-million employee's covered in the surveys were engaged in those activities, which include purchasing. Here is the personnel distribution breakdown for that group:

	No. Of People	% Of Workforce
General management, external relations, legal, secretarial planning, budgeting	9,700	0.96
Accounting, auditing, finance, insurance, taxation, credit and collections	32,300	3.19
Personnel	12,400	1.22
Purchasing	11,400	1.13
Office services, traffic, and auxiliary services	18,400	1.82
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Item & Company	Amount of Change	New Price	Reason
INCREASES			
Magnesium Chloride, carlots, cwt.....	.25	\$3.00	higher costs
Potassium Bromate, carlot, lb.....49	higher costs
Diphenylamine, tankcar, fused, lb.....	.01	.29	shortage
Fir plywood, 1/4", sanded panels, maf.....	\$4.00	\$68.00	mkt. strength
Gum turps., so., gal.....	.005	.46	
Polyvinyl butyral sheeting (safflex), Monsanto, Oct. 1..	7.2%-10%	incr. costs
REDUCTIONS			
Carpets (Bigelow-Sanford)—Gropoint line, sq. yd.....	.42	competition
Casein, Arg., crlts., lb.....	.0025	.1975	slow demand
polish, crlts., lb.....	.0025	.1925	slow demand

Auto Makers Crank Up Big Romance to Win Fleet Car Buyers

(Continued from page 1)
before has he had such a rich field to choose from.

Counting Chevrolet, Ford, and Plymouth, the new low-priced lineup includes Lark and Rambler, plus the four compacts introduced last year, and the four new ones to be marketed soon (Buick Special, Pontiac Tempest, Oldsmobile F-85, Dodge Lancer) in addition to the Dart and "economy" lines of Mercury and Pontiac.

New Importance

As an indicator of the fleet buyer's new importance in today's shifting markets, auto makers are pushing the idea that the new crop of compacts may eliminate the "downgrading" stigma from fleets. Oldsmobile, for example, in its Broadway-type



CHRYSLER ROLLS: 1961 models hit road to dealer showrooms.

dealer announcement show now touring the country, makes a big point of stressing the fleet potential of its longer and more luxurious new compact F-85.

The F-85, a 112-in. wheelbase car, and its cousin, the Buick Special, share a peppy all-aluminum V-8 that will deliver 155 hp.

With one horsepower for every 17 lb. of curb weight, this engine should eliminate driver complaints of not enough performance while passing or entering expressways.

Economy, meanwhile, is more than adequate, as proved by a

group of auto writers who had no trouble achieving over 30 miles per gal. at reasonable speeds. Equally important is the fact that this engine is designed to happily digest any existing service station product, including regular grade gasoline. The new block material will cause no new maintenance problems.

Pontiac's Tempest will be powered by a four-cylinder cast iron front engine that is essentially the current V-8 sliced lengthwise in half—but GM's aluminum V-8 will be available as an option. The Tempest is unique among American makes in offering a transaxle combined with a front-mounted engine—a configuration that permits conventional trunk room as well as flat front and rear floors by placing the transmission atop the differential and connecting it to the engine through a new type of driveshaft that has as many bends as a wilted soda straw.

Dodge's Lancer is nearly seven inches longer than the Valiant, and has a more powerful six-cylinder engine. With its torsion-bar front suspension, this is one of the best riding of the compacts and all of the additional length has gone into more trunk space.

Alternator for City Traffic

Noteworthy feature of both Lancer and Valiant is a flat trunk floor; the spare tire is in a compartment underneath. Use of an alternator rather than a generator on 1961 Chrysler products means the end of battery trouble during stop-and-go driving, because the alternator charges even at idle.

Comet and Falcon are continued with little change except for a more powerful engine option, claimed to give 20% better acceleration.

Corvair has moved its spare tire in with the rear mounted, air-cooled engine and has added a station wagon whose cargo space is a little too compact even for a cigarette salesman's wares.

Biggest news from Ford and

Chevrolet is the addition of slab-nose, compact commercial vehicles. Each offers carryalls, pickups and panels of exceptional maneuverability. The 95-in. wheelbase Corvair pickup has an optional ramp on the side to facilitate loading.

Rambler's American has been completely restyled, although the company notes that the new look will continue indefinitely to "protect an owner's investment." Already the smallest of U.S. compacts, the new one is 5.2 in. shorter and 3 in. narrower.

Yet passenger room remains as before and luggage space has been increased by 50%. Larger Ramblers feature a new OHV six-cylinder engine with a die-cast aluminum block. Each Rambler has a ceramic-coated, lifetime exhaust system.

The Studebaker Lark also has a new six-cylinder engine, although many of the parts from the current model are interchangeable. On a relative basis, the styling of present Larks will not be obsolete for it takes an expert to tell the new Lark from its predecessor. A 113-in. wheelbase sedan, called the Cruiser, has been added to the line.

Smaller Cars to Come

Although the foregoing lineup rounds out the compact picture for the 1961 model year, it provides few clues as to the future. Perhaps a hint of the shape of things to come is provided in a report from Ford that it is planning to build a small car—smaller than anything on the compact market today—to be called the Cardinal.

If reports are true, the car will be designed to compete with Volkswagen and will be built mostly in Europe for introduction in the U.S. in 1962. The new entry, powered by a four cylinder engine, would be less expensive and somewhat smaller than the current Taunus now built by Ford's German subsidiary, Ford-Werke A.G.

Standard-Size Fleets

Fords, Chevrolets, and Plym-

ouths have undergone slimming, because 1960 models violated width laws in a number of states. P.A.'s faced with the high cost of collision repairs will delight in the near absence of fins. Plymouth, in fact, has dropped them entirely, the Chevrolet has returned to a trunk configuration that opens at bumper level.

Ford products, excluding Falcon and Comet, are featuring suspension and steering bearings that need be lubricated only at 30,000 mile intervals.

Dodge's nicely restyled Dart will continue to be a strong contender in the fleet market at a price competitive with any of the Big Three. It and Plymouth share a cast-iron, OHV six slanted at a 30-degree angle, as well as a variety of V-8's that range over 300 horsepower in "police specials."

Pontiac's chances in the fleet market will be enhanced by a 119-in. wheelbase series to be priced in competition with middle line Fords, Chevy's and Plymouths. Mercury, for the first time in its history, will offer a six-cylinder model. As this engine, as well as the basic Mercury body, is identical to that used in the Ford, an opportunity exists for the P. A. to offer supervisory personnel a more luxurious car without the penalty of stocking a separate line of parts for the special model.

Prices

Contrary to common speculation, steel will not be an initial factor in the setting of 196-model auto prices. Several key auto executives have noted off the record that a steel increase is not expected before spring, if then.

However, automakers as of Sept. 1 started paying a 6¢ escalator wage hike to UAW-CIO mem-

bers, as did many auto suppliers. This is expected to be reflected in a modest 1.3% price hike. Thus a fleet owner may pay \$36 more for a \$2,000 car, but on the other hand, if GM holds the line and absorbs the wage hikes, the others will follow.

The new crop of "king-size" compacts is expected to be priced competitively with middle-line Fords, Chevrolets, and Plymouths; e. g., in a range between \$2,500 to \$3,000.

Existing compacts, meanwhile, are holding up well on the used car market. First year depreciation, percentage-wise, is about the same or a little better than standard-size fleet-type cars. Four-door Corvairs were bringing \$1,500 at auction in Flint last week. In Detroit the gavel dropped on Falcon two-doors for the same price. In Los Angeles, the going rate was at least \$250 higher. There a 1960 Comet four-door with automatic transmission brought \$2,070, a price only \$200 less than the new retail list.

Only dealers are allowed to attend these specialized auctions, and the prices, of course, reflect an anticipated profit margin when the car is resold later at retail. Either trade-in or private resale of fleet cars will bring higher dollars.

One additional fact is apparent and that is with the exception of Volkswagen, resale value of American-built compacts is holding up far better than that of their imported equivalents. Buyers of these will lose \$600-\$700 during the first year of ownership. New import sales are also slipping rapidly, with a total of only 400,000 expected in 1961. This is off 260,000 from the peak of 1959 and has brought with it a significant mortality among dealerships of these makes.

Cost-Cutting Automation Gets Accent At the Chicago Machine Tool Shows

(Continued from page 1)
business. The degree of automation will vary—tape control will be best for one job, while a tracer attachment might be enough to do another."

Although numerically-controlled units accounted for less than 10% of the tools on the floor, they commanded the biggest single share of visitor interest. Price, considered the major barrier to wide-spread adoption, is becoming less of a deterrent to potential buyers.

Burg Tool Mfg. Co. claims that a buyer "can afford to buy the controls if he can afford to buy the machine." Prices for point-to-point systems generally fall into the \$5,000 to \$8,000 per axis range.

General Electric regards its new "Mark Century" tape control as a major price breakthrough. The contouring system is priced at \$20,000 (2-axis) to \$30,000 (3-axis). GE says the unit will "do most contouring jobs at a fraction of the cost of conventional controls."

Builders don't expect the real rush of numerical control orders for a few years, but the impact is already effecting sales. "Around 25% to 30% of the orders in my territory are coming in with tape control included,"

a Giddings & Lewis salesman explained. "Tape control is moving from missiles to general industrial applications," he added.

Exhibitors were also pretty unanimous in opinion of where most of the numerical controlled units will be used. "Tape is definitely a short run tool" everybody agreed, but lots varying from 1 to 5,000 were mentioned as economic break-even points.

Even though tape control "stole the show," tool builders had more new conventional machines to exhibit than in any time in the history of the tool shows. Three trends were evident: Tools were faster, more rugged, and give higher accuracy.

The Coliseum Machinery Show, composed of foreign companies and non-members of the NMTBA, was split about 70-30 in favor of the foreign companies. Price, often a hidden entity at the big tool show was highly advertised here, but quality wasn't neglected.

"We're offering machinery here that is as good or better quality-wise as anything made in the U. S.—and at prices the domestic companies can't approach. This \$8,000 milling machine would cost double that here," a representative of the S & S Machinery Co. said.

'School for Strategists' Ready for Fall Term

The doors open on Purchasing Week's "School for Strategists" next week. Beginning with the issue of Sept. 19, you'll be able to master the latest tools of management science, operations research and game theory, with the help of play-at-your-desk, pencil and paper games.



J. M. OWEN, JR.

You'll find these games real teasers for your common sense. No mathematical training is needed beyond ordinary business arithmetic, because Purchasing Week's Game Experts, John M. Owen, Jr., and Martin L. Leibowitz, have boiled the calculus and statistics down to step-by-step rules and instructions.

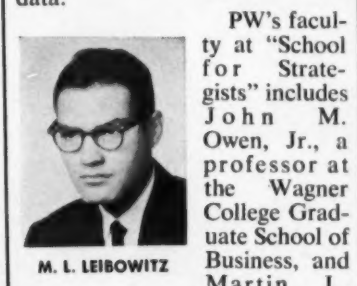
By playing the games every week, you'll master the man-

agement skills of a top-level business strategist. The first game, to be solved by the Theory of Games of Strategy, will require you to lay out some company strategy in the face of an equally sharp business opponent.

You'll have to set up alternate courses of action and, what's more, put a dollar sign on the payoff for your decision. Then Purchasing Week will show you how to use a "game theory matrix," a cross-word puzzle-like box that makes decision-making a breeze. Use your pencil for a few minutes, then check the answer page to see how you've done with these page-age business tools.

Game theory has helped strategists plan everything from battles in war-time to check-out counters in supermarkets. Operations research also has helped some of the biggest corporations solve production, shipping, and distribution problems. It's a technique that helps you sort out

and analyze hundreds of pieces of apparently unrelated business data.



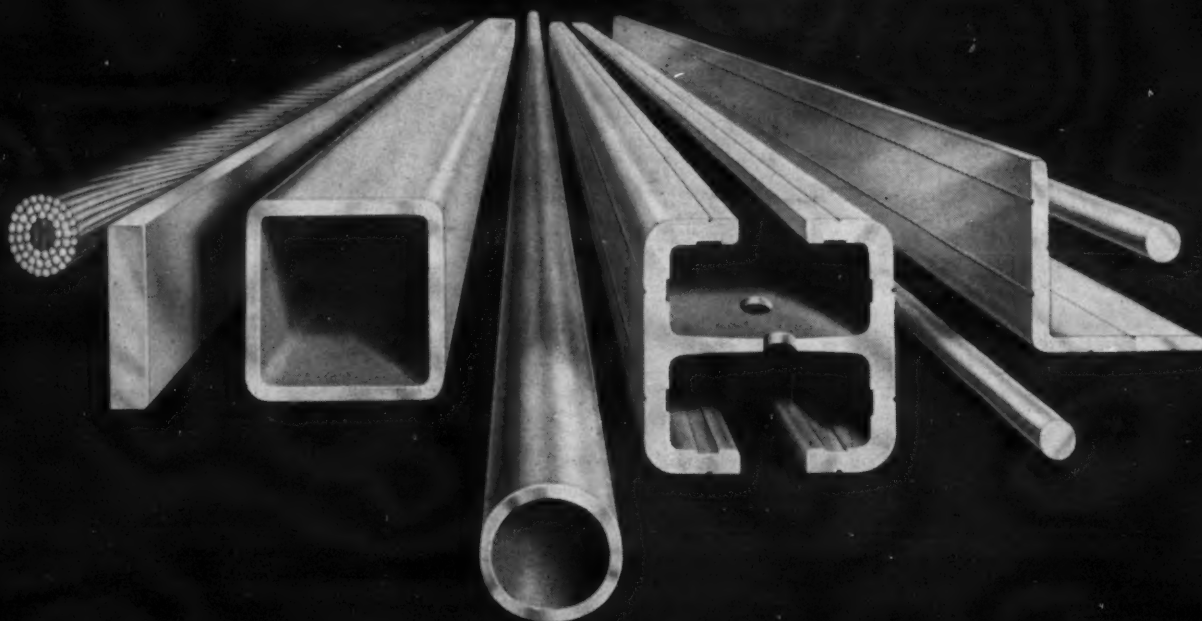
M. L. LEIBOWITZ

PW's faculty at "School for Strategists" includes John M. Owen, Jr., a professor at the Wagner College Graduate School of Business, and Martin L. Leibowitz, Assistant Director of Systems Research Group, Mineola, N. Y.

Leibowitz has had experience in missile mathematics with Convair Div. of General Dynamics Corp., and has done operations research with Stanford Institute. Owen teaches purchasing and inventory control, and draws on a practical background as a former commodity analyst and economist with Western Electric and the Econometric Institute.



A REPORT FROM ALCOA



To
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on
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CONDUCTOR

How one p. a. saved \$3000 with lightweight aluminum bus. For a new 130,000-sq.-ft. plant in the Midwest, Alcoa aluminum bus conductor was selected over copper—at a saving of more than \$3000 in direct material costs alone.

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You save 50% to 60% on initial cost alone . . . plus further savings on handling, installation and maintenance.

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Availability? Getting Alcoa aluminum bus—and the service that comes with it—is no problem. With the number of distributors in our network, we'd be very surprised if there isn't one within a few hours' delivery time of your plant.

Get the facts now. Ask your Alcoa distributor to give you the facts about aluminum bus. If you would like the name and address of the distributor nearest you, write to Rome Cable Division of Alcoa, Department 13-90, Rome, New York.

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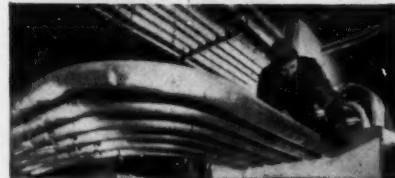
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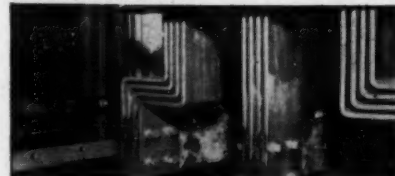
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